HP A-U200-A/A-U200-S

Unified Threat Management Product

Installation Guide

Part number: 5998-1414
Document version: 6PW100-20110909

Legal and notice information

© Copyright 2011 Hewlett-Packard Development Company, L.P.

No part of this documentation may be reproduced or transmitted in any form or by any means without prior written consent of Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

HEWLETT-PACKARD COMPANY MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Contents

Product overview 1
A-U200-A architecture description 1
A-U200-S architecture description 2

Preparing for installation 3
Safety recommendations 3
Safety symbols 3
General safety recommendations 3
Safety with electricity 3
Safety with laser 4
Examining the installation site 4
Temperature and humidity 4
Altitude 5
Cleanness 5
Cooling system 5
ESD prevention 6
EMI 7
Lightning protection 7
Rack-mounting 8
Installation tools 8
Accessories supplied by the UTM device 8
Checklist before installation 9

Installing the UTM device 11
Installation flow 11
Installing the UTM device in a 19-inch rack 11
Grounding the UTM device 13
Installing interface modules 13
Installing a 2GE interface module 13
Installing an NSQ1GT2UA0 or NSQ1GP4U0 interface module 14
Installing a CF card 15
Connecting Ethernet cables 15
Connecting a copper Ethernet cable 15
Connecting an optical fiber 16
Connecting a power cord 17

Logging in to the UTM device and configuring basic settings 19
Logging in to the UTM device through the console port 19
Connecting the UTM device to a configuration terminal through a console cable 19
Setting terminal parameters 20
Powering on the UTM device 23
Checking before power-on 23
Checking after power-on 23
Logging in to the UTM device through Telnet 24
Logging in to the UTM device through a web browser 24
Performing basic settings for the UTM device 25
Launching the basic configuration wizard 25
Configuring the system name and user password 26
Configuring service management 27
Configuring the IP address for an interface 29

Configuring NAT 30
Completing the configuration wizard 31
Hardware management and maintenance 33
Displaying detailed information about the UTM device 33
Displaying software and hardware version information of the UTM device 34
Displaying the electrical label information of the UTM device 34
Displaying the CPU usage of the UTM device 35
Displaying the memory usage of the UTM device 35
Displaying the CF card information 35
Displaying the operational status of the fans 36
Displaying the operational status of a power module 36
Displaying the temperature information of the UTM device 36
Displaying operational statistics of the UTM device 37
Saving the running configuration of the UTM device 37
Rebooting the UTM device 38
Replacement procedures 40
Safety recommendations 40
Replacing an interface module 40
Replacing a CF card 41
Replacing a transceiver module 42
Troubleshooting 44
Power supply system failure 44
Fan failure 44
Configuration terminal problems 45
No terminal display 45
Garbled terminal display 45
Password loss 45
User password loss 45
Super password loss 46
Cooling system failure 47
Interface module failure 47
Appendix A Technical specifications 48
Dimensions and weight 48
Storages 48
Power consumption range 48
Power consumption range 48
Fixed Ethernet ports specifications 49
Console port 49
Appendix B LEDs 50
LEDs 50
Appendix C Interface modules 52
2GE interface module 52
NSQ1GT2UA0 interface module 53
NSQ1GP4U0 interface module 54
Appendix D AC power cables used in different countries or regions 56
10A AC power cables used in different countries or regions 56
16A AC power cables used in different countries or regions 59
Support and other resources 62
Contacting HP 62
Subscription service 62

Related information 62
Documents 62
Websites 62
Conventions 63
Index 65

Product overview

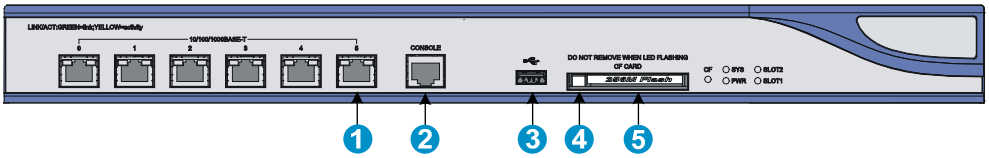
This chapter includes these sections:

- A-U200-A architecture description
- A-U200-S architecture description

A-U200-A architecture description

Front panel

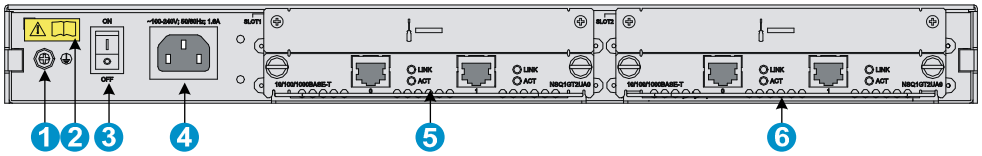
Figure 1 A-U200-A front panel



(1) Copper Ethernet ports (GE0 through GE5)	(2) Console port
(3) USB interface	(4) CF card eject button
(5) CF card slot	

Rear panel

Figure 2 A-U200-A rear panel

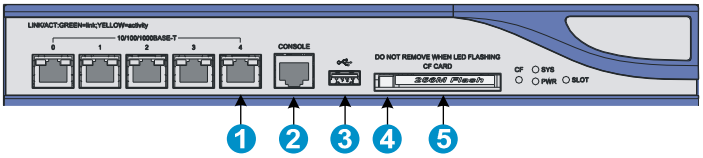


(1) Grounding terminal and mark	(2) "OPEN BOOK" mark
(3) AC power switch (ON/OFF)	(4) AC power receptacle
(5) Slot1 (with an NSQ1GT2UA0 interface module installed in this diagram)	(6) Slot2 (with an NSQ1GT2UA0 interface module installed in this diagram)

A-U200-S architecture description

Front panel

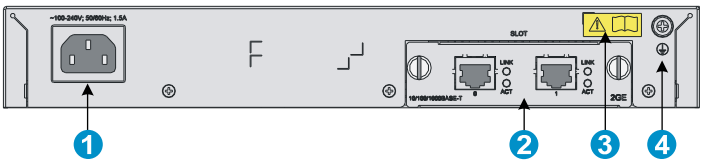
Figure 3 A-U200-S front panel



(1) Copper Ethernet ports (GE0 through GE4)	(2) Console port
(3) USB interface	(4) CF card eject button
(5) CF card reader	

Rear panel

Figure 4 A-U200-S rear panel



(1) AC power receptacle	(2) Slot (with a 2GE interface module installed in this diagram)
(3) Grounding terminal and mark	(4) "OPEN BOOK" mark

The OPEN BOOK mark indicates that the operator must read the following chapters before working with the UTM device:

Table 1 References for the operations

Operation	Reference
Ground the UTM device	See "Grounding the UTM device."
Connect the power supply	See "Connecting a power cord."

Preparing for installation

This chapter includes these sections:

- Safety recommendations
- Examining the installation site
- Installation tools
- Accessories supplied by the UTM device
- Checklist before installation

Safety recommendations

To avoid possible bodily injury and equipment damage, read the safety recommendations in this chapter carefully before installing a UTM device. The recommendations do not cover every possible hazardous condition.

This section includes these topics:

- Safety symbols
- General safety recommendations
- Safety with electricity
- Safety with laser

Safety symbols

When reading this document, note the following symbols:

⚠ WARNING means an alert that calls attention to important information that if not understood or followed can result in personal injury.

⚠ CAUTION means an alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.

General safety recommendations

- Keep the chassis and installation tools away from walk areas.
- Make sure that the ground is dry and flat and anti-slip measures are in place.
- Unplug all the external cables (including power cables) before moving the chassis.

Safety with electricity

- Locate the emergency power-off switch in the room before installation. Shut the power off at once in case accident occurs.
- Make sure that the UTM device has been correctly grounded.
- Connect the interface cables for the UTM device correctly.
- Use an uninterruptible power supply (UPS).

- Do not work alone when the UTM device has power.
- Always check that the power has been disconnected.

Safety with laser

- Do not stare into the optical port or fiber connector because the laser light emitted from the optical fiber may hurt your eyes.
- Install a dust plug on the transceiver module to avoid damage to the transceiver module.

Examining the installation site

The UTM device can only be used indoors. To ensure that the UTM device works properly and to prolong its service lifetime, the installation site must meet the following requirements:

- Temperature and humidity
- Altitude
- Cleanness
- Cooling system
- ESD prevention
- EMI
- Lightning protection
- Rack-mounting

Temperature and humidity

You must maintain a proper temperature and humidity in the equipment room. Long-term high humidity may lead to bad insulation, electricity leakage, mechanical property changes, and metal corrosion. However, if the humidity is too low, captive screws may become loose as the result of contraction of insulation washers and static electricity may be produced in a dry environment to jeopardize the circuits on the device. A high temperature is the most undesirable condition, because it accelerates the aging of insulation materials and significantly lowers reliability and service life of the UTM device.

Table 2 Temperature requirements

Item	Temperature
Operating temperature	0°C to 45°C (32°F to 113°F)
Storage temperature	–40°C to 70°C(–40°F to 158°F)

Table 3 Humidity requirements

Item	Humidity
Operating humidity	10% to 95%
Storage humidity	5% to 95%

Altitude

Table 4 Altitude requirements

Item	Altitude
Operating altitude	–60 m (–196.85 ft) to 3 km (1.86 miles)
Storage altitude	–60 m (–196.85 ft) to 4.5km(2.8 miles)

Cleanness

Dust buildup on the chassis may result in electrostatic adsorption, which causes poor contact of metal components and contact points, especially when indoor humidity is low. In the worst case, electrostatic adsorption can cause communication failure.

Table 5 Dust concentration limit in the equipment room

Substance	Concentration limit (particles/cu m)
Dust particles	≤ 3×10^4 (No visible dust on desk in three days)
NOTE: Dust particle diameter ≥ 5 μm	

The equipment room must also meet strict limits on salts, acids, and sulfides to eliminate corrosion and premature aging of components, as shown in Table 6.

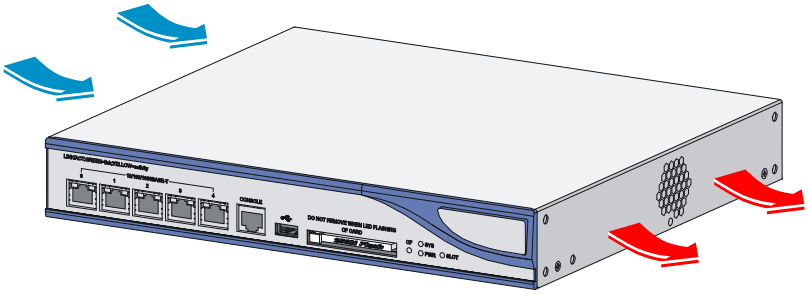
Table 6 Harmful gas limits in an equipment room

Gas	Max. (mg/m^3)
SO_2	0.2
H_2S	0.006
NH_3	0.05
Cl_2	0.01

Cooling system

The UTM device adopts left to right airflow for heat dissipation. The following diagram takes an A-U200-S for example.

Figure 5 UTM device airflow



- Make sure there is enough space (greater than 10 cm (3.94 in)) around the air intake and outlet vents on the UTM device for good ventilation.
- Make sure the installation site has a good cooling system.

ESD prevention

To prevent electrostatic discharge (ESD), note the following guidelines:

- Make sure that the UTM device and the floor are well grounded.
- Take dust-proof measures for the equipment room.
- Maintain the humidity and temperature at a proper level.
- Always wear an ESD-preventive wrist strap when touching a circuit board or transceiver module.
- Place the removed CF card or interface module on an antistatic workbench, with the face upward, or put it into an antistatic bag.
- Touch only the edges, instead of electronic components when observing or moving a removed CF card or interface module.

To use the ESD-preventive wrist strap, perform the following steps:

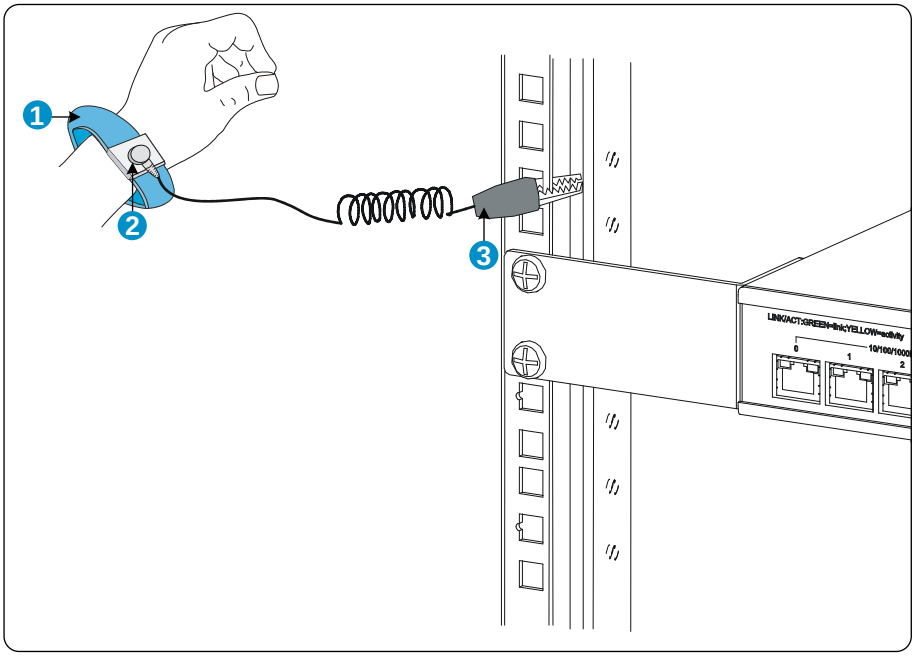
Step1 Wear the wrist strap on your wrist.

Step2 Lock the wrist strap tight around your wrist to keep good contact with the skin.

Step3 Attach the ESD-preventive wrist strap to the rack with the alligator clips.

Step4 Make sure that the rack is well grounded.

Figure 6 Use an ESD-preventive wrist strap



(1) ESD-preventive wrist strap	(2) Lock
(3) Alligator clip	

CAUTION:

- Check the resistance of the ESD-preventive wrist strap for safety. The resistance reading should be in the range of 1 to 10 megohm (Mohm) between human body and the ground.
- No ESD-preventive wrist strap is provided with the HP UTM device. Prepare it yourself.

EMI

To prevent electromagnetic interference (EMI) when using the UTM device, note the following guidelines:

- Take measures against interference from the power grid.
- Do not use the UTM device together with the grounding equipment or light-prevention equipment of power equipment, and keep the UTM device far away from them.
- Keep the UTM device far away from high-power radio launchers, radars, and equipment with high frequency or high current.

NOTE:

Use electromagnetic shielding when necessary.

Lightning protection

To protect the UTM device from lightning better, do as follows:

- Make sure the grounding cable of the chassis is well grounded.
- Make sure the grounding terminal of the AC power receptacle is well grounded.

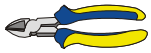
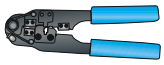
- Install a lightning arrester at the input end of the power supply to enhance the lightning protection capability of the power supply.

Rack-mounting

Before mounting the UTM device in a standard 19-inch rack, adhere to the following requirements:

- The rack is sturdy enough to support the UTM device and installation accessories.
- Make sure that the size of the rack is appropriate for the UTM device, and that there is enough clearance around the left and right sides of the UTM device for heat dissipation.
- For heat dissipation and device maintenance, make sure the front and rear of the rack should be at least 0.8 m (2.62 ft) away from walls or other devices, and that the headroom in the equipment room should be no less than 3 m (9.84 ft).

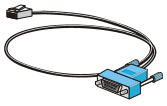
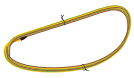
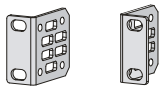
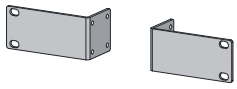
Installation tools

				
Flat-blade screwdriver	Phillips screwdriver	Needle-nose pliers	Wire-stripping pliers	Diagonal pliers
				
RJ45 crimping pliers	Multimeter	Network cable tester	Mark pen	ESD-preventive wrist strap

NOTE:

No installation tool or ESD-preventive wrist strap is provided with the UTM device. Prepare them yourself.

Accessories supplied by the UTM device

				
Console cable	Grounding cable	Mounting bracket for A-200-A	Mounting bracket for A-200-S	Feet

Checklist before installation

Table 7 Checklist before installation

Item		Requirements	Result
Installation site	Ventilation	• There is a minimum clearance of 10 cm (3.9 in) around the inlet and exhaust vents for heat dissipation of the UTM device chassis. • A ventilation system is available at the installation site.	
	Operating temperature	0°C to 45°C (32°F to 113°F)	
	Operating humidity	10% to 95%	
	Cleanness	Dust concentration ≤ 3×10^4 particles/m^3	
	ESD prevention	• The equipment and floor are well grounded. • The equipment room is dust-proof. • The humidity and temperature are at a proper level, respectively. • Wear an ESD-preventive wrist strap and uniform when touching a circuit board. • Place the removed CF card or interface module on an antistatic workbench, with the face upward, or put it into an antistatic bag. • Touch only the edges, instead of electronic components when observing or moving a removed CF card or interface module.	
	EMI prevention	• Take effective measures to protect the power system from the power grid system. • Separate the protection ground of the UTM device from the grounding device or lightning protection grounding device as far as possible. • Keep the UTM device far away from radio stations, radar and high-frequency devices working in high current. • Use electromagnetic shielding when necessary.	
	Lightning protection	• The grounding cable of the chassis is well grounded. • The grounding terminal of the AC power receptacle is well grounded.	
	Electricity safety	• Equip an uninterruptible power supply (UPS). • In case of emergency during operation, switch off the external power switch.	
	Rack-mounting requirements	• The rack is sturdy enough to support the weight of the UTM device and installation accessories. • The size of the cabinet is appropriate for the UTM device. • The front and rear of the cabinet are at least 0.8 m (31.50 in) away from walls or other devices.	

Item	Requirements	Result
Safety precautions	• The UTM device is far away from any moist area and heat source. • The emergency power switch in the equipment room is located.	
Tools	• Installation accessories supplied with the UTM device • User supplied tools	
Reference	• Documents shipped with the UTM device • Online documents	

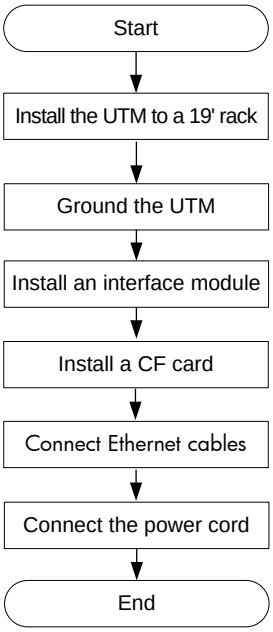
Installing the UTM device

This chapter includes these sections:

- Installation flow
- Installing the UTM device in a 19-inch rack
- Grounding the UTM device
- Installing interface modules
- Installing a CF card
- Connecting Ethernet cables
- Connecting a power cord

Installation flow

Figure 7 HP A-U200-A/A-U200-S UTM device installation flow

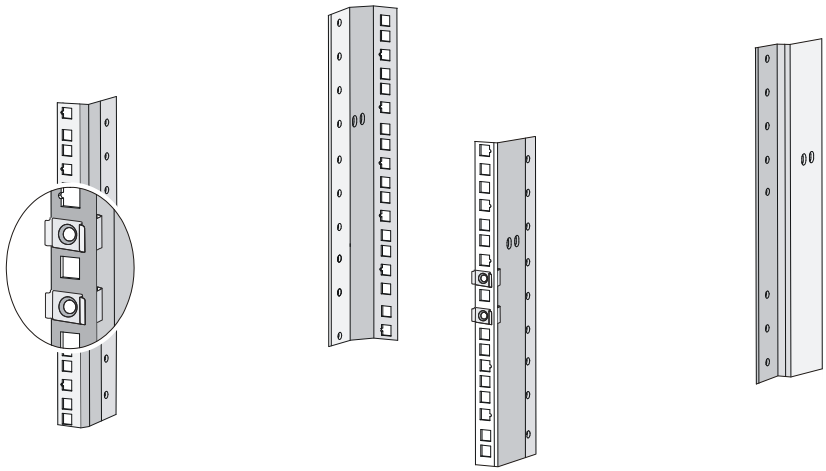


Installing the UTM device in a 19-inch rack

The installation procedure of an A-U200-A is similar to an A-U200-S. This section takes an A-U200-S as an example.

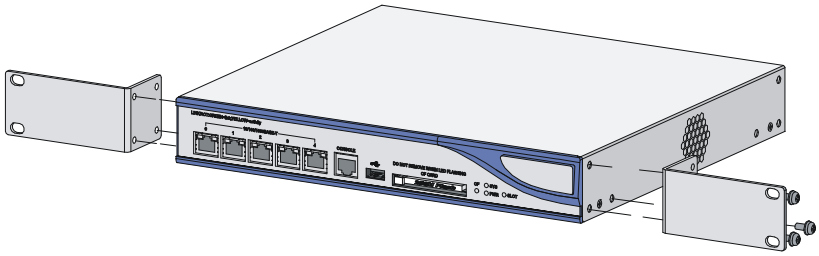
Step1 As shown in Figure 8, install the cage nuts to proper positions on the rack posts.

Figure 8 Install cage nuts



Step2 Install the mounting brackets to both sides of the front panel.

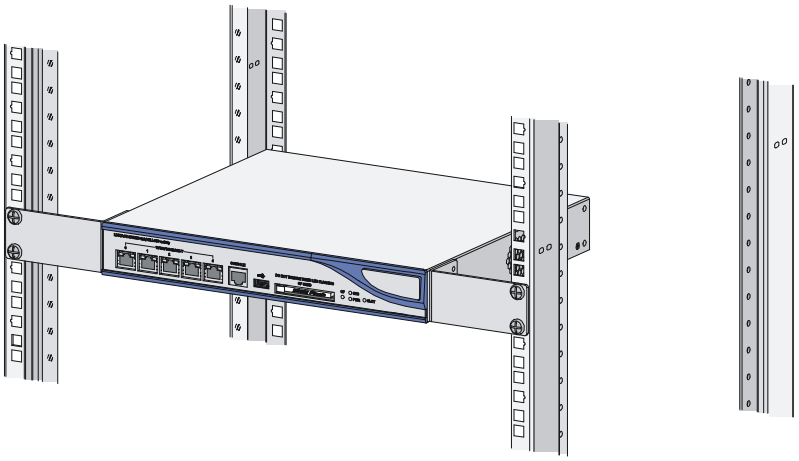
Figure 9 Install the mounting brackets to both sides of the front panel



Step3 Supporting the UTM device bottom with one hand, push the UTM device into the rack horizontally.

Step4 Fix the UTM device horizontally by fastening the front mounting brackets at both sides to the rack with appropriate pan head screws. The specifications of pan head screws must satisfy the installation requirements, and rustproof treatment has been made to their surfaces.

Figure 10 Fix the UTM device to the rack



Grounding the UTM device

WARNING!

Correctly connecting the UTM device grounding cable is crucial to lightning protection and EMI protection.

Follow these steps to connect the grounding cable:

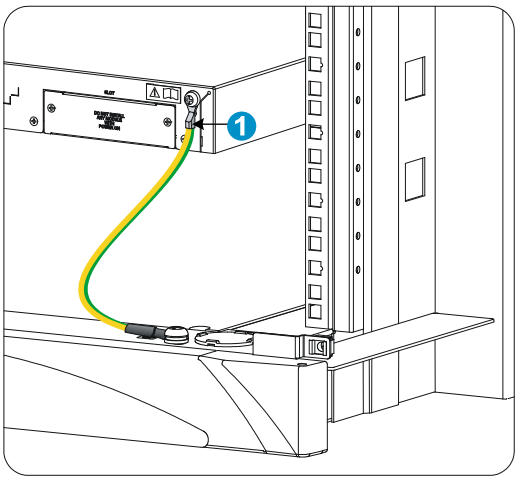
Step1 Remove the grounding screw from the rear panel of the UTM device chassis.

Step2 Attach the grounding screw to the OT terminal of the grounding cable.

Step3 Use a screwdriver to fasten the grounding screw into the grounding screw hole.

Step4 Ground the other end of the grounding cable, as shown in Figure 11, by connecting the other end of the grounding cable to the grounding terminal of the rack.

Figure 11 Connect the grounding cable



(1) OT terminal

Installing interface modules

NOTE:

Keep the removed filler panel and screws for future use.

Installing a 2GE interface module

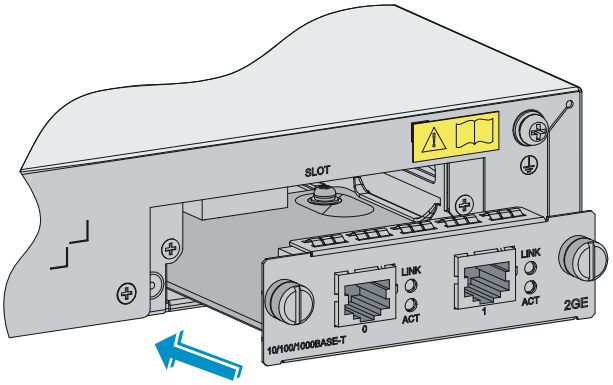
The A-U200-S supports only 2GE interface modules. Follow these steps to install a 2GE interface module:

Step1 Use a Phillips screwdriver to loosen the fastening screws on the filler panel, and then remove the filler panel.

Step2 Push the 2GE interface module slowly along the guide rails into the slot until it touches the slot bottom, as shown in Figure 12.

Step3 Use a screwdriver to fasten the captive screws on the 2GE interface module.

Figure 12 Install a 2GE interface module



Installing an NSQ1GT2UA0 or NSQ1GP4U0 interface module

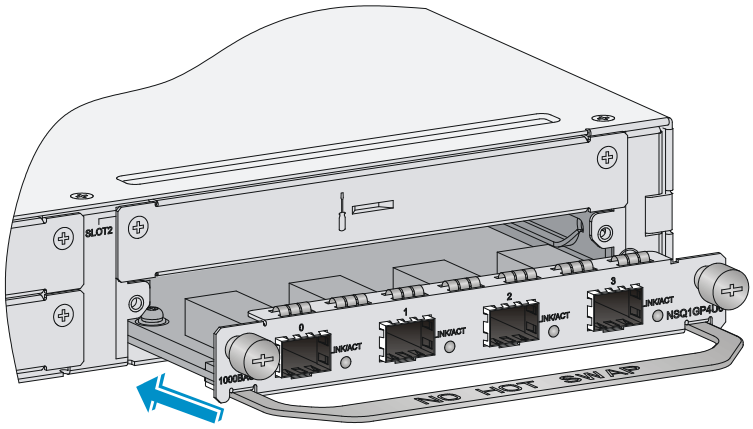
The A-U200-A supports NSQ1GT2UA0 and NSQ1GP4U0 interface modules. The installation procedure of the two interface modules are the same. This section takes an NSQ1GP4U0 interface module for example. Follow these steps to install an NSQ1GP4U0 interface module:

Step1 Select the slot where you want to install the NSQ1GP4U0 interface module. Use a Philips screwdriver to loosen the fastening screws on the filler panel, and remove the filler panel. The interface module can be installed only in the lower slot.

Step2 Push the interface module slowly along the guide rails into the slot until it touches the slot bottom, as shown in Figure 13.

Step3 Use a screwdriver to fasten the captive screws on the NSQ1GP4U0 interface module.

Figure 13 Install an NSQ1GP4U0 interface module



Installing a CF card

CAUTION:

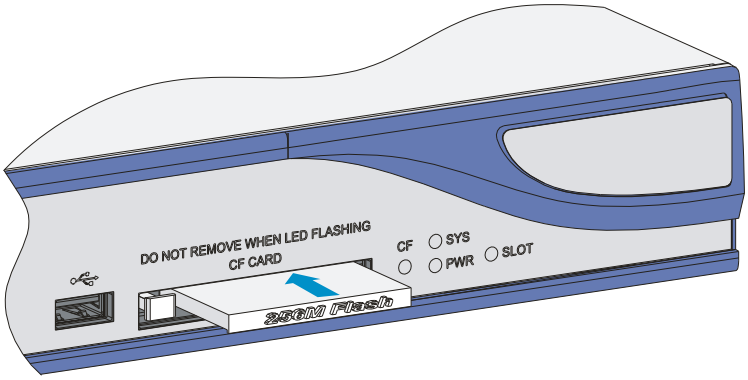
The UTM device supports only HP-provided CF cards, and does not guarantee compatibility with any other CF cards.

Follow these steps to install a CF card:

Step1 Push the CF card eject button all the way into the slot, and make sure that the button does not project from the panel.

Step2 Insert the CF card into the slot following the direction shown in Figure 14, and make sure it does not project from the slot.

Figure 14 Install the CF card



NOTE:

If the boot file of the UTM device is stored in the CF card, before booting the UTM device, make sure that the CF card has been correctly installed. Otherwise, the UTM device cannot be booted.

Connecting Ethernet cables

Connecting a copper Ethernet cable

The copper Ethernet ports of the HP A-U200-A/A-U200-S UTM device support MDI/MDI-X auto-sensing. You can use either standard network cables or crossover Ethernet cables.

Follow these steps to connect a copper Ethernet cable:

Step1 Connect one end of an Ethernet twisted pair cable to the copper Ethernet port on the UTM device.

Step2 Connect the other end of the cable to the peer device.

Step3 Check the LINK LED of the port when you power on the UTM device. If the LINK LED is steady on, you can be sure that the link is connected. For more information about the LED status, see the chapters "Appendix B LEDs." and "Appendix C Interface modules."

Connecting an optical fiber

Before connecting an optical fiber to the SFP port of an NSQ1GP4U0 interface module, you must install a transceiver module to the SFP port, and then insert a LC fiber connector to the transceiver module.

⚠ WARNING!

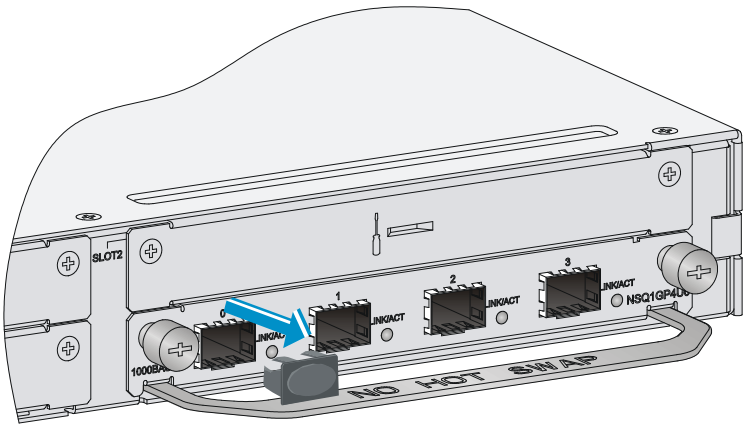
When connecting an optical fiber, note the following guidelines:

- Never bend or curve a fiber when connecting it. After a fiber is installed well, the bend radius must be not less than 10 cm (3.94 in).
- Keep the fiber end clean.
- Make sure that the fiber connector matches the transceiver module.
- Before connecting a fiber, make sure that the optical power at the receiving end does not exceed the upper threshold of the optical receive power of the transceiver module. Otherwise, the transceiver module may be damaged. For the optical power of a transceiver module, see the chapter "Appendix C Interface modules."

Follow these steps to connect optical fibers:

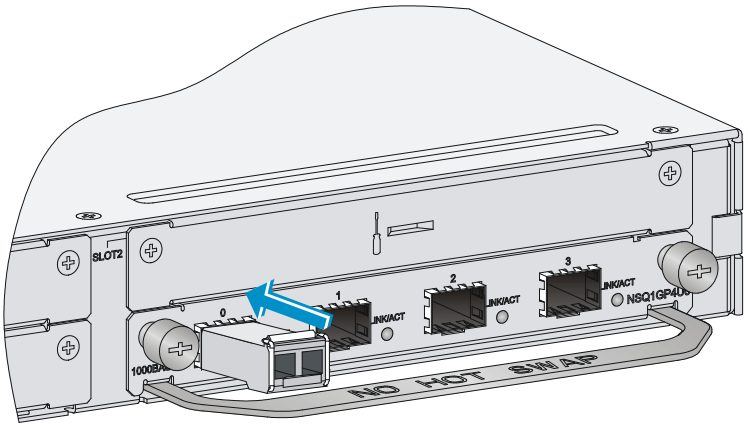
Step1 Remove the dust plug of the SFP port.

Figure 15 Remove the dust plug



Step2 Plug the transceiver module into the SFP port of the UTM device, as shown in Figure 16.

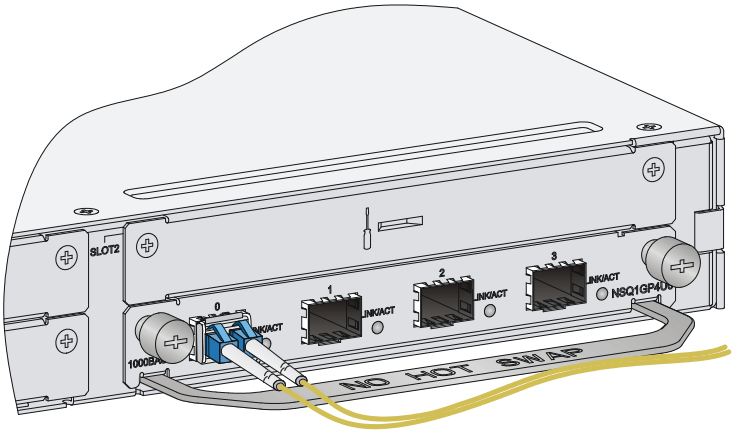
Figure 16 Install the transceiver module



Step3 Remove the dust cap from the transceiver module and the protective caps from the fibers.

Step4 Plug the LC connectors on one end of the fiber cable into the Rx and Tx ports, and plug the LC connectors on the other end to the Tx and Rx ports on the peer device, as shown in Figure 17.

Figure 17 Connect the fiber connectors



Step5 Check the LED of the fiber port when you power on the UTM device. If the LINK LED is steady on, it means that the link is connected. For more information about the LED status, see the chapter "Appendix C Interface modules."

Connecting a power cord

To connect an AC power cord, follow these steps:

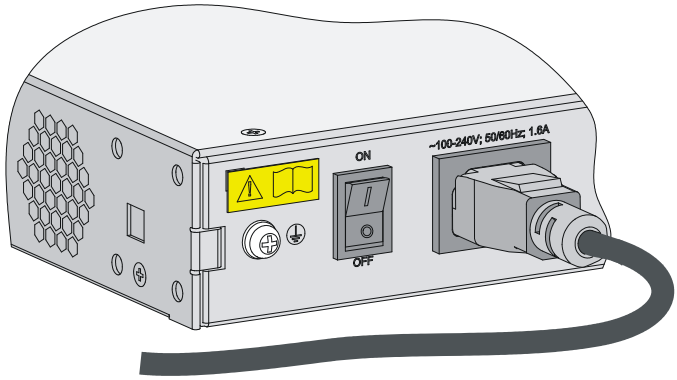
Step1 Make sure the UTM device is well grounded.

Step2 Make sure that the power switch on the UTM device is in the OFF position. An A-U200-S UTM device does not provide a power switch, so you should turn off the switch of the power source.

Step3 Connect one end of the AC power cord to the AC receptacle on the UTM device, and the other end to the AC power source.

Step4 (Optional) Use cable ties to secure the power cord to the rack to avoid drop of the power cord.

Figure 18 Connect an AC power cord to the UTM device (A-U200-A for example)



Logging in to the UTM device and configuring basic settings

This chapter includes these sections:

- Logging in to the UTM device through the console port
- Powering on the UTM device
- Logging in to the UTM device through Telnet
- Logging in to the UTM device through a web browser
- Performing basic settings for the UTM device

This chapter describes only the commonly used methods for logging in to the UTM device. For more UTM device login methods, such as login through SSH and NMS, see the configuration guides for the UTM device.

Logging in to the UTM device through the console port

Connecting the UTM device to a configuration terminal through a console cable

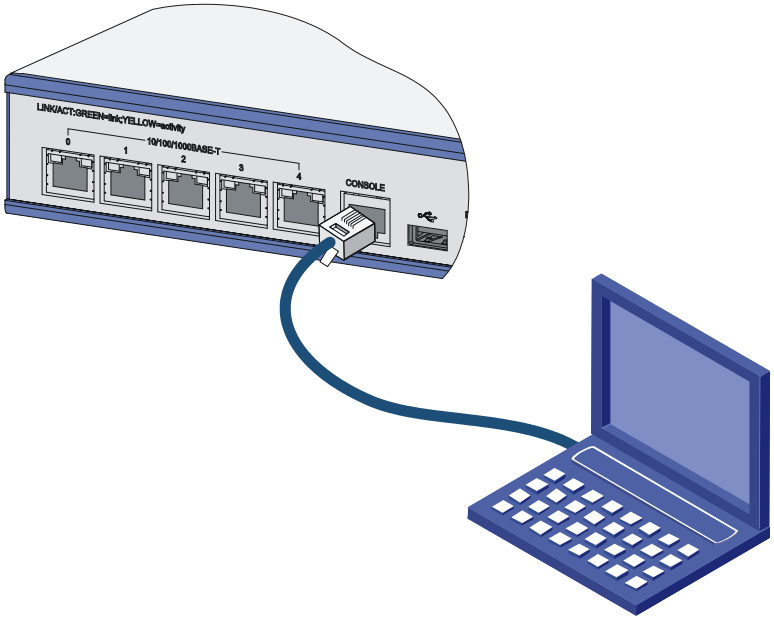
Follow these steps to connect a configuration terminal to the UTM device by using the console cable:

Step1 Select a configuration terminal, which can be a character terminal with an RS232 serial port, or a PC. This section takes connecting an A-U200-S UTM device to a PC for example.

Step2 Plug the DB-9 female connector to the serial port of the PC.

Step3 Connect the RJ-45 connector to the console port of the UTM device.

Figure 19 Connect the console cable



CAUTION:

- When you connect a PC to a powered-on UTM device, connect the DB-9 connector of the console cable to the PC before connecting the RJ-45 connector to the UTM device.
- When you disconnect a PC from a powered-on UTM device, disconnect the DB-9 connector of the console cable from the PC after disconnecting the RJ-45 connector from the UTM device.

Setting terminal parameters

Follow these steps to set terminal parameters on a terminal, for example, Windows XP HyperTerminal:

Step1 Select **Start** > **All Programs** > **Accessories** > **Communications** > **HyperTerminal** to enter the HyperTerminal window. The **Connection Description** dialog box appears, as shown in Figure 20.

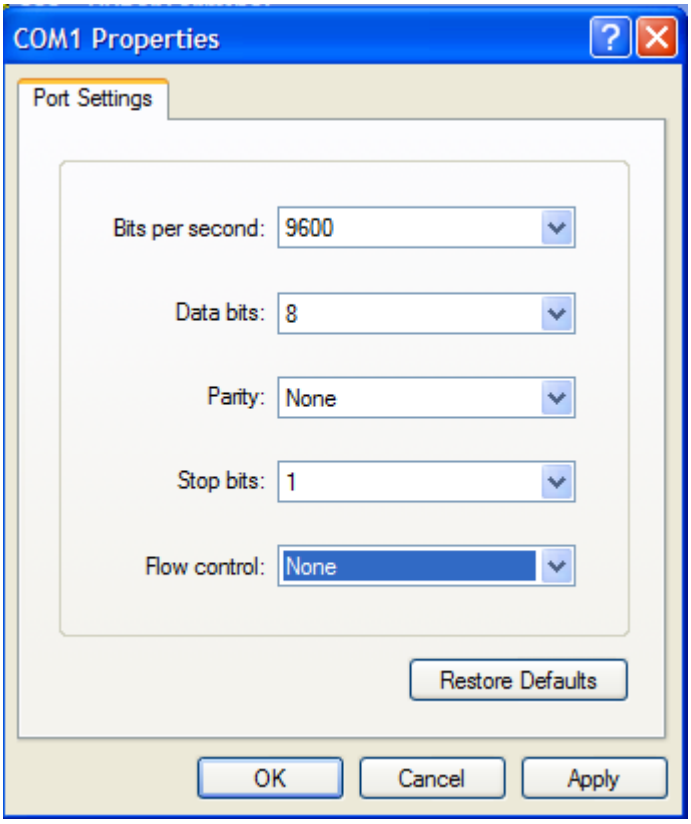
Figure 20 Connection description of the HyperTerminal

Step2 Type the name of the new connection in the **Name** text box and click **OK**. The following dialog box appears. Select the serial port to be used from the **Connect using** drop-down list.

Figure 21 Set the serial port used by the HyperTerminal connection

Step3 Click **OK** after selecting a serial port and the following dialog box appears. Set **Bits per second** to **9600**, **Data bits** to **8**, **Parity** to **None**, **Stop bits** to **1**, and **Flow control** to **None**.

Figure 22 Set the serial port parameters

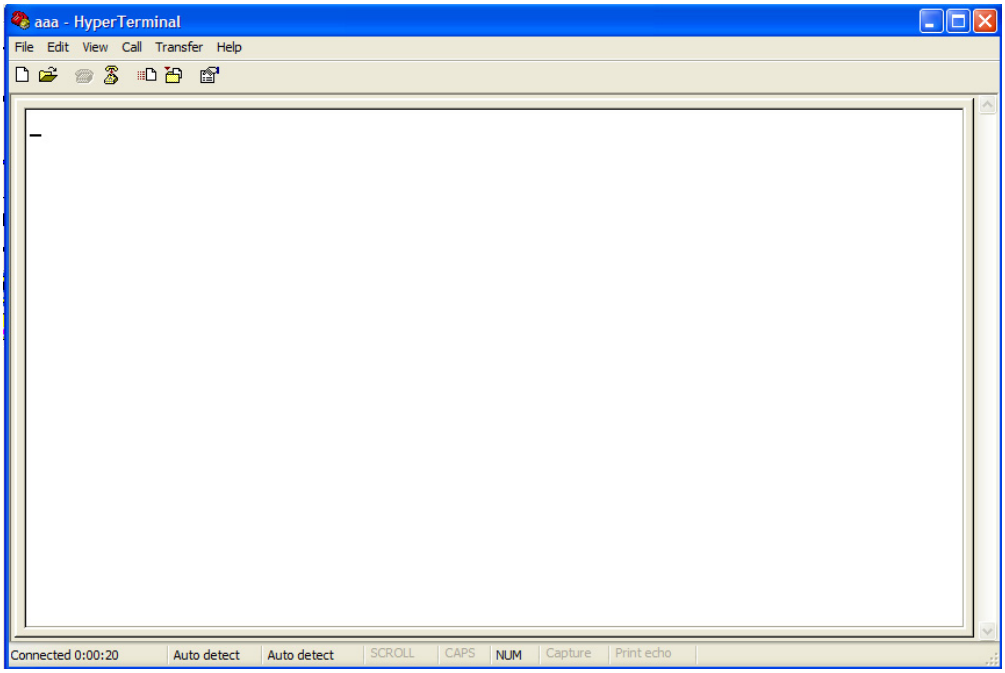


NOTE:

To use the default settings, click **Restore Defaults**.

Step4 Click **OK** after setting the serial port parameters and the system enters the following interface.

Figure 23 HyperTerminal window



Step5 Click **Properties** in the HyperTerminal window to enter the **aaa Properties** dialog box. Click the **Settings** tab, set the **Emulation** to **VT100**, and then click **OK**.

Powering on the UTM device

Checking before power-on

Before powering on the UTM device, verify the following items:

- The power cord and grounding cable are properly connected.
- The power source matches that required by the UTM device.
- The console cable is properly connected; the terminal or PC used for configuration has started; and the configuration parameters have been set.
- If a CF card is used, check whether the CF card is in position.

Checking after power-on

After powering on the UTM device, check the following items:

- The LEDs on the front panel are normal. For information about the LED status, see the chapter "Appendix B LEDs."
- The fans work properly, and you can hear fan rotating.
- The configuration terminal displays information normally. You can see the startup window on the local configuration terminal.
- After the POST, the system prompts you to press **Enter**. When the command line prompt appears, the UTM device is ready to configure.

Logging in to the UTM device through Telnet

NOTE:

For more information about the Telnet login, see the configuration guides for the UTM device.

You can use the default information to log in to the A-U200-A/A-U200-S UTM device. The default login information includes:

- Username: admin
- Password: admin
- IP address of port GigabitEthernet 0/0: 192.168.0.1/24

Follow these steps to log in to the UTM device through Telnet:

Step1 Log in to the UTM device through the console port and then use the **telnet server enable** command in system view to enable the Telnet function of the UTM device.

By default, Telnet is disabled on the UTM device.

Step2 Connect the UTM device to a PC.

Connect port GigabitEthernet 0/0 of the UTM device to a PC by using an Ethernet cable.

Step3 Configure an IP address for the PC, ensuring the PC and the UTM device can ping each other.

Set the IP address to any one but 192.168.0.1 within the range of 192.168.0.0/24. For example, set the address to 192.168.0.2.

Step4 Use the Telnet command to log in to the UTM device.

Logging in to the UTM device through a web browser

The UTM device supports web-based network management, which allows you to manage and maintain the UTM device in a more user-friendly way.

Your UTM device was delivered with the default web logging information. You can use this default information to log in to the web page of your UTM device. The default web logging information includes:

- User name: admin
- Password: admin
- IP address of port GigabitEthernet 0/0: 192.168.0.1/24

Follow these steps to log in to your UTM device through a web browser:

Step1 Connect a cable to the UTM device.

Connect the Ethernet interface GigabitEthernet 0/0 of the UTM device to a PC by using a network cable.

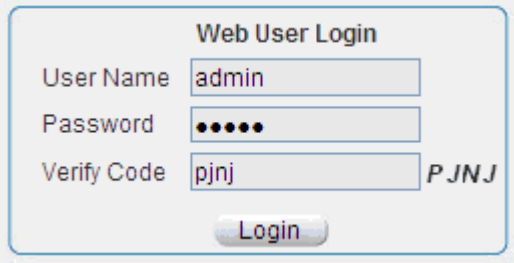
Step2 Configure an IP address for the PC, making sure that the PC and the UTM device can ping each other.

Set the IP address to any one but 192.168.0.1 within the range of 192.168.0.0/24. For example, set the address to 192.168.0.2.

Step3 Launch the web browser and input the login information.

Launch the web browser on the PC. Type **192.168.0.1** in the address bar and press **Enter**. The login dialog box appears, as shown in Figure 24. In this dialog box, enter your user name (admin), password (admin), verify code and click **Login**.

Figure 24 Web login dialog box



Then, the web interface of the UTM device appears.

Performing basic settings for the UTM device

This section describes the fast configuration by using the basic configuration wizard. For more information about how to configure the protocols and features for the A-U200-A/A-U200-S UTM device, see the configuration guides for the UTM device.

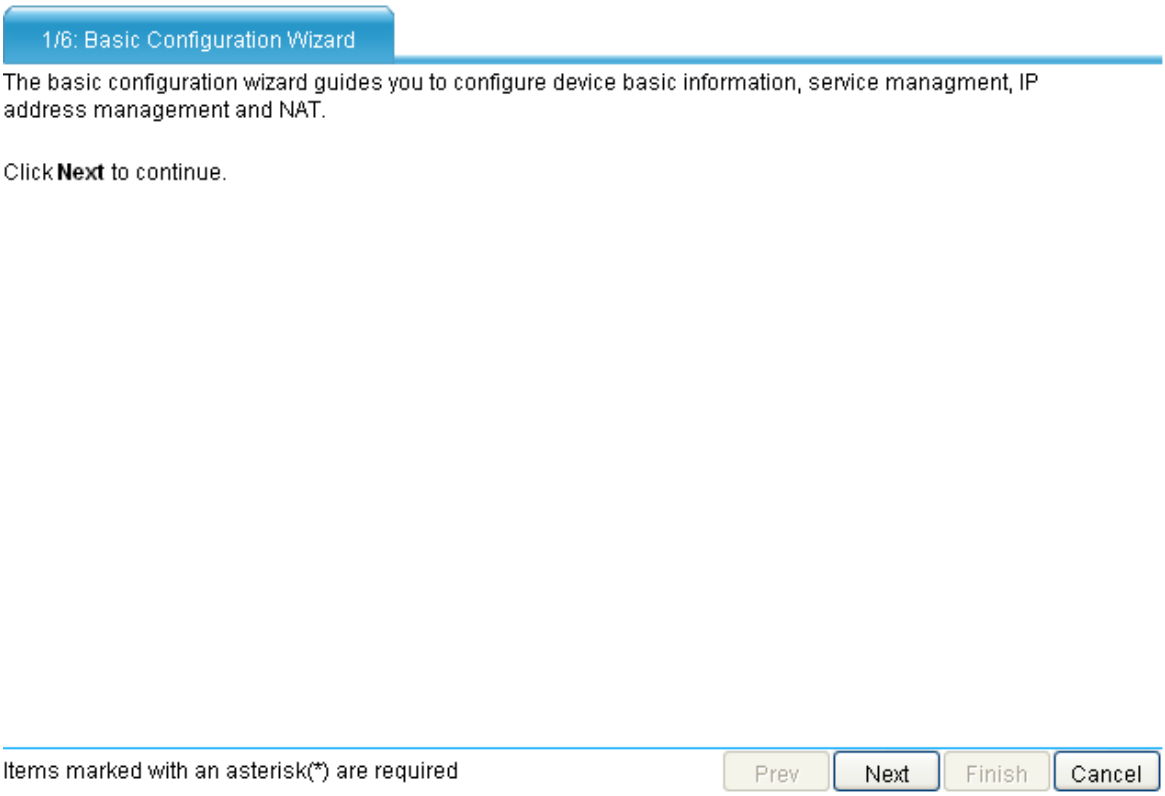
NOTE:

The web interfaces may vary by the software version.

Launching the basic configuration wizard

Select **Wizard** from the navigation tree to enter the **Configuration Wizard** page, and then click the **Basic Device Information** hyperlink to enter the first page of the basic configuration page, as shown in Figure 25.

Figure 25 Basic configuration wizard: 1/6


1/6: Basic Configuration Wizard
The basic configuration wizard guides you to configure device basic information, service managment, IP address management and NAT.
Click Next to continue.
Items marked with an asterisk(*) are required
Prev
Next
Finish
Cancel

Configuring the system name and user password

Click **Next** on the first page of the basic configuration wizard to enter the basic information configuration page, as shown in Figure 26.

Figure 26 Basic configuration wizard: 2/6 (basic information)

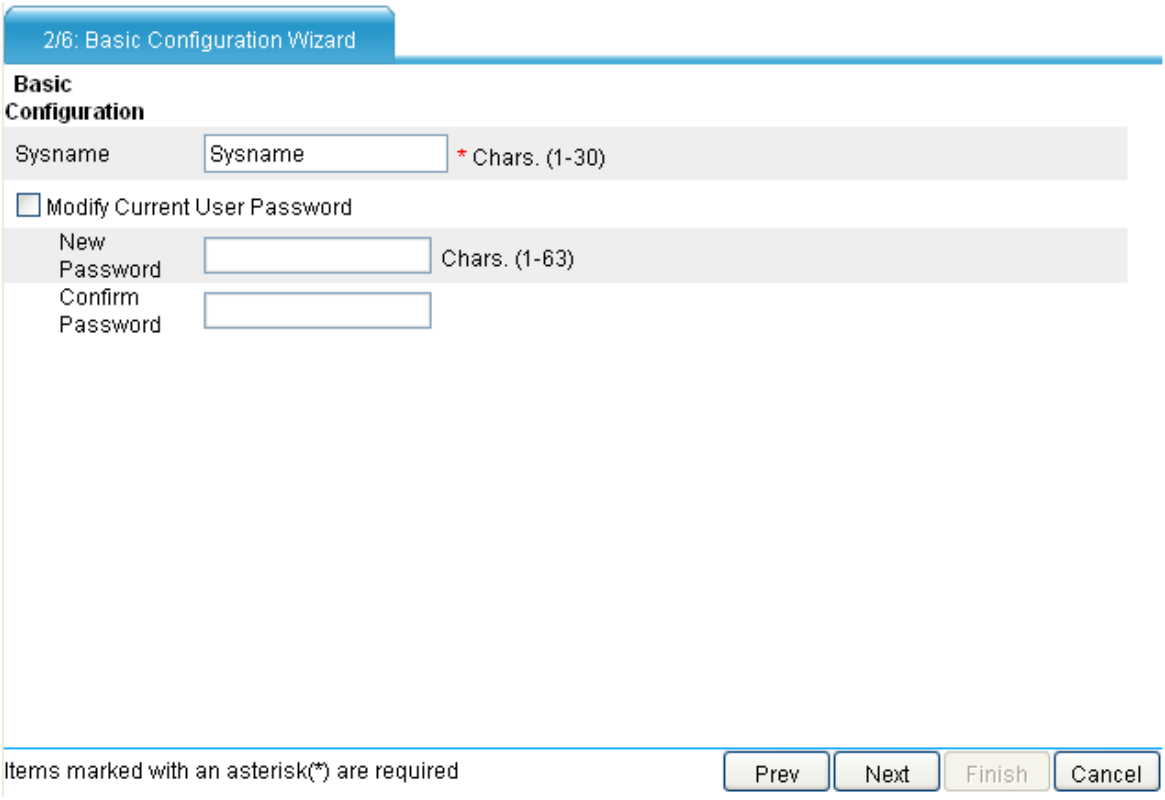


Table 8 Basic information configuration items

Item	Description
Sysname	Set the system name. By default, the system name of the UTM device is **HP**.
Modify Current User Password	Specify whether to modify the login password of the current user. To modify the password of the current user, set the new password and the confirm password, and the two passwords must be identical. By default, the UTM device login username and password are both **admin**.
New Password	
Confirm Password	

Configuring service management

Click **Next** on the basic information configuration page to enter the service management page, as shown in Figure 27.

Figure 27 Basic configuration wizard: 3/6 (service management)

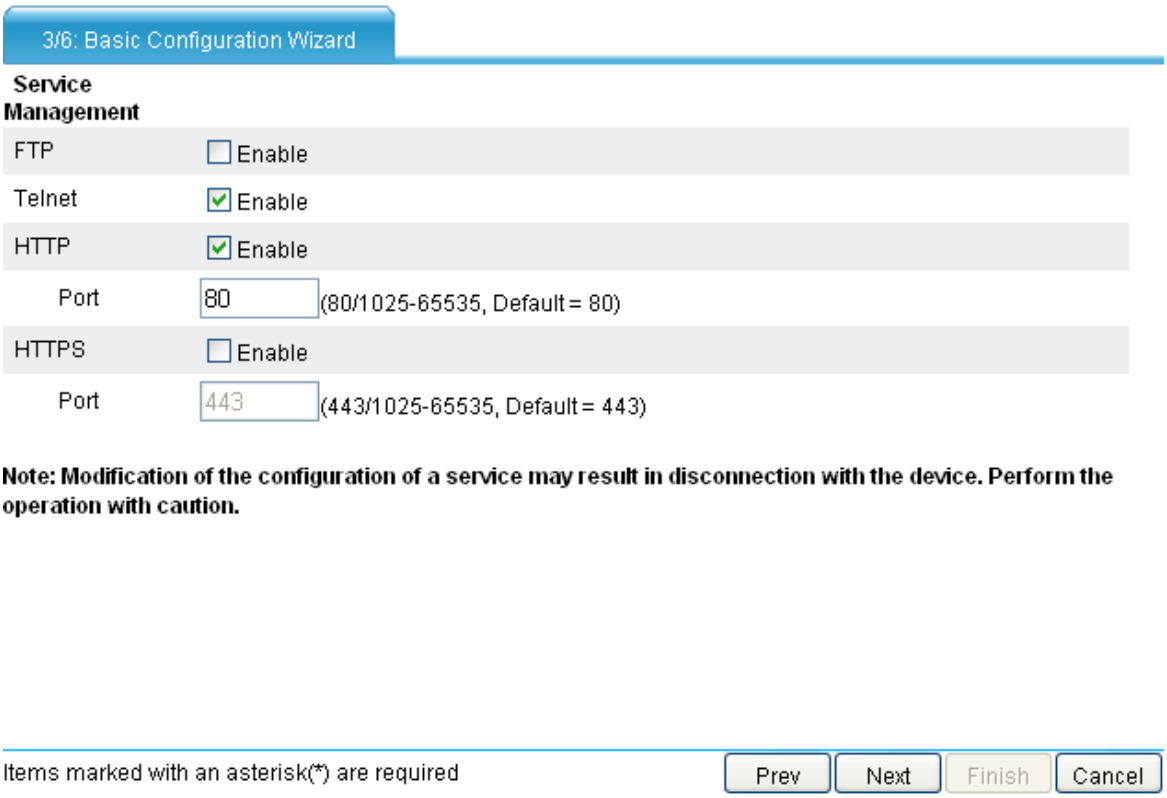


Table 9 Service management configuration items

Item	Description
FTP	Specify whether to enable FTP on the device. Disabled by default.
Telnet	Specify whether to enable telnet on the device. Disabled by default.
HTTP	Specify whether to enable HTTP on the device, and set the HTTP port number. Enabled by default. IMPORTANT: • If the current user has logged in to the web interface through HTTP, disabling HTTP or modifying the HTTP port number will result in disconnection with the device; therefore, perform the operation with caution. • When you modify a port number, ensure that the port number is not used by another service.

Item	Description
HTTPS	Specify whether to enable HTTPS on the device, and set the HTTPS port number. HTTPS is the HTTP protocol that supports the Secure Sockets Layer (SSL) protocol. It can improve device security. Disabled by default. IMPORTANT: • If the current user logged in to the web interface through HTTPS, disabling HTTPS or modifying the HTTPS port number will result in disconnection with the device; therefore, perform the operation with caution. • When you modify a port number, ensure that the port number is not used by another service. • By default, HTTPS uses the PKI domain **default**. If this PKI domain does not exist, the system will prompt you for it when the configuration wizard is completed; however, this will not affect the execution of other configurations.

Configuring the IP address for an interface

Click **Next** on the service management configuration page to enter the interface IP address configuration page, as shown in Figure 28. The table lists the IP address configuration information for all Layer 3 Ethernet interfaces and VLAN interfaces. You can click a value in the table and then modify it. Only when the IP configuration is **Static Address**, can you configure the IP address and mask.

Figure 28 Basic configuration wizard: 4/6 (interface IP configuration)

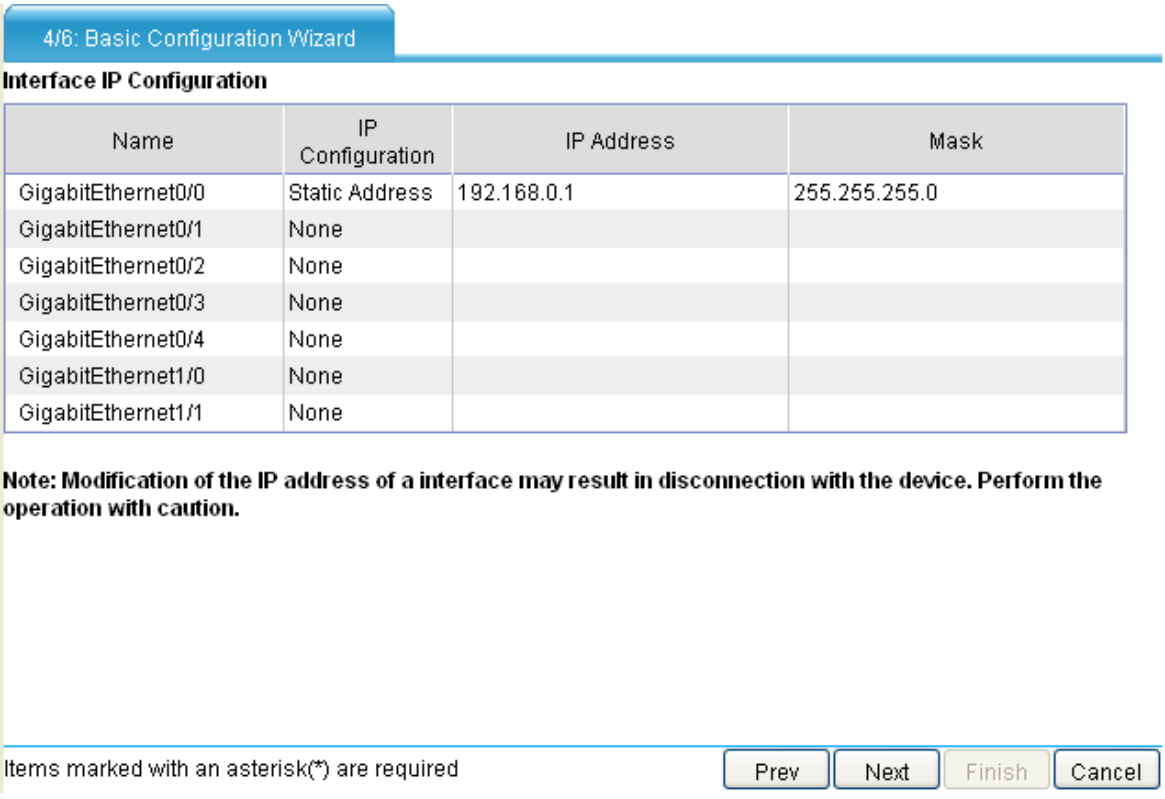


Table 10 Interface IP address configuration items

Item	Description	
IP Configuration	Set the approach for obtaining the IP address, including: • None: The IP address of the interface is not specified, that is, the interface has no IP address. • Static Address: Specify the IP address for the interface manually; if you select this item, you need to specify both the IP address and the mask. • DHCP: The interface obtains an IP address automatically through the DHCP protocol. • Do not change: The IP address of the interface does not change.	IMPORTANT: Modification to the interface IP address will result in disconnection with the device, so make changes with caution.
IP Address	If you select **Stack Address** as the approach for obtaining the IP address, you need to set the interface IP address and network mask.	
Mask		

Configuring NAT

Click **Next** on the interface IP address configuration page to enter the NAT configuration page, as shown in Figure 29.

Figure 29 Basic configuration wizard: 5/6 (NAT configuration)

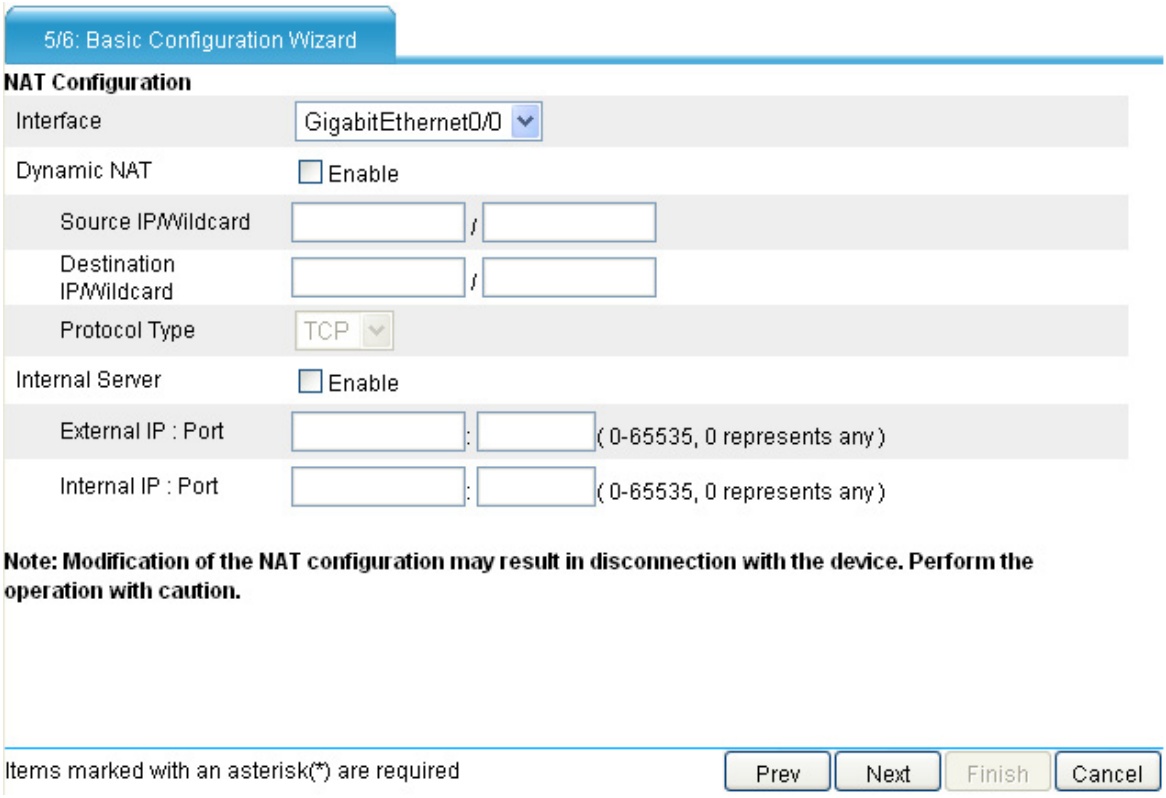


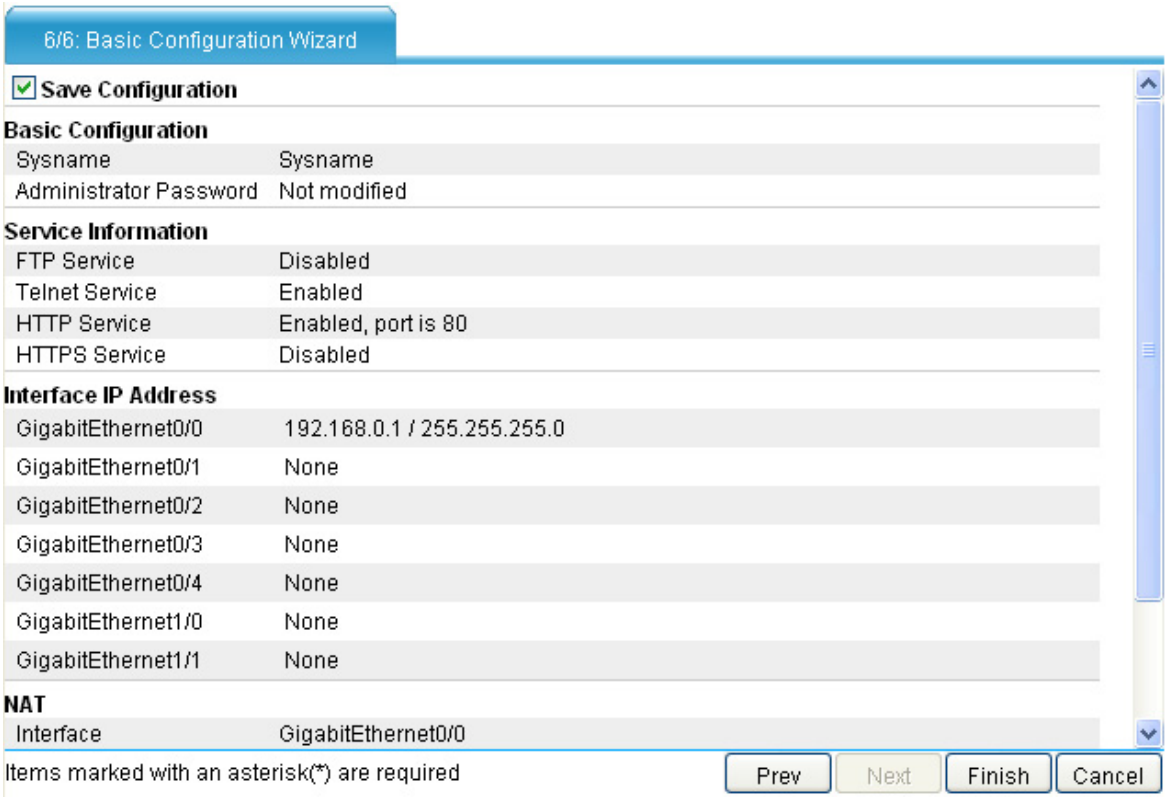
Table 11 NAT configuration items

Item	Description
Interface	Select an interface on which the NAT configuration will be applied. Generally, it is the outgoing interface of the device.
Dynamic NAT	Specify whether to enable dynamic NAT on the interface. If dynamic NAT is enabled, the IP address of the interface will be used as the IP address of a matched packet after the translation. By default, dynamic NAT is disabled.
Source IP/Wildcard	If dynamic NAT is enabled, set the source IP address and wildcard for packets.
Destination IP/Wildcard	If dynamic NAT is enabled, set the destination IP address and wildcard for packets.
Protocol Type	If dynamic NAT is enabled, select the protocol type carried over the IP protocol, including TCP, UDP, and IP (indicating all protocols carried by the IP protocol).
Internal Server	Specify whether to enable the internal server. You can configure an internal server on the NAT device by mapping a public IP address and port number to the private IP address and port number of the internal server. By default, the internal server is disabled. IMPORTANT: Configuration of the internal server may result in disconnection with the device (for example, specify an external IP address as the IP address of the local host or as the IP address of the current access interface). Perform the operation with caution.
External IP: Port	When the internal server is enabled, set the valid IP address and service port number for the external access.
Internal IP: Port	If the internal server is enabled, set the IP address and service port number for the server on the internal LAN.

Completing the configuration wizard

Click **Next** on the NAT configuration page to enter the page shown in Figure 30.

Figure 30 Basic configuration wizard: 6/6



This page lists all configurations you have made in the basic configuration wizard. Confirm the configurations. To modify your configuration, click **Prev** to go back to the previous page; if no modification is needed, click **Finish** to execute all configurations.

Hardware management and maintenance

This chapter includes these sections:

- Displaying detailed information about the UTM device
- Displaying software and hardware version information of the UTM device
- Displaying the electrical label information of the UTM device
- Displaying the CPU usage of the UTM device
- Displaying the memory usage of the UTM device
- Displaying the CF card information
- Displaying the operational status of the fans
- Displaying the operational status of a power module
- Displaying the temperature information of the UTM device
- Displaying operational statistics of the UTM device
- Saving the running configuration of the UTM device
- Rebooting the UTM device

NOTE:

- The CLI and outputs may vary by the software version. For more information about the commands used in this chapter, see the command references for the UTM device.
- This chapter uses an A-U200-S for example.

Displaying detailed information about the UTM device

Use the **display device verbose** command to display detailed information of the device and interface module, including the operational status and hardware version information.

```
<Sysname>display device verbose
 Status      :OK
 Type        :RPU
 Hardware    :B
 Driver      :1.0
 CPLD        :2.0
 SubCard Num :2
 CFCard Num  :1
 Usb Num     :1

 The Fixed SubCard0 on Board0
 Status      :Normal
 Type        :Fixed Subcard
 Hardware    :B
```

```
Driver      :1.0
CPLD        :2.0

The SubCard1 on Board0:
Status      :Normal
Type        :ETH82571-2GE CARD
Hardware    :B
Driver      :1.0
CPLD        :1.0
```

Displaying software and hardware version information of the UTM device

Use the **display version** command to display software and hardware version information of the UTM device.

```
<Sysname> display version
HP Comware Platform Software
Comware Software, Version 5.20, Release 5116P18
Copyright (c) 2010-2011 Hewlett-Packard Development Company, L.P.
HP A-U200-S uptime is 0 week, 0 day, 0 hour, 15 minutes

512M bytes DDR2 SDRAM Memory
 32M bytes Flash Memory
 247M bytes CF0 Card
 PCB             Version:Ver.B
 Logic           Version:  2.0
 Basic  BootWare  Version:  1.01
 Extend BootWare  Version: 29.29
 [FIXED PORT] CON       (Hardware)Ver.B, (Driver)1.0,    (Cpld)2.0
 [FIXED PORT] GE0/0     (Hardware)Ver.B, (Driver)1.0,    (Cpld)2.0
 [FIXED PORT] GE0/1     (Hardware)Ver.B, (Driver)1.0,    (Cpld)2.0
 [FIXED PORT] GE0/2     (Hardware)Ver.B, (Driver)1.0,    (Cpld)2.0
 [FIXED PORT] GE0/3     (Hardware)Ver.B, (Driver)1.0,    (Cpld)2.0
 [FIXED PORT] GE0/4     (Hardware)Ver.B, (Driver)1.0,    (Cpld)2.0
 [SUBCARD  1] 2GE       (Hardware)Ver.B, (Driver)1.0,    (Cpld)1.0
```

Displaying the electrical label information of the UTM device

Use the **display device manuinfo** command to display your UTM device's electrical label information.

```
<Sysname> display device manuinfo
slot 0
DEVICE_NAME         :aaaa
DEVICE_SERIAL_NUMBER:xxxx
MAC_ADDRESS         :000F-E287-3DC4
MANUFACTURING_DATE  :2011-7-29
```

```
VENDOR_NAME          :HP

slot 1
DEVICE_NAME          :NONE
DEVICE_SERIAL_NUMBER:NONE
MAC_ADDRESS          :NONE
MANUFACTURING_DATE   :NONE
VENDOR_NAME          :HP
```

Displaying the CPU usage of the UTM device

Use the **display cpu-usage** command to display the CPU usage of a UTM device.

```
<Sysname> display cpu-usage
Unit CPU usage:
       1% in last 5 seconds
       1% in last 1 minute
       1% in last 5 minutes
```

Displaying the memory usage of the UTM device

Use the **display memory** command to display the memory usage of a UTM device.

```
<Sysname> display memory
System Total Memory(bytes): 472887200
Total Used Memory(bytes): 151376488
Used Rate: 32%
```

Displaying the CF card information

Use the **display device cf-card** command to display the CF card information.

```
<Sysname> display device cf-card
Compacted Flash Card Information:
 CF ID 1
   Status: Normal
   Size  : 247M bytes
```

Table 12 Output description

Field	Description
CF ID	Slot number of the CF card
Status	Operational status of the CF card: • Absent—No CF card is present in the slot. • Fault—The CF card fails. • Normal—The CF card is operating properly.
Size	Storage capacity of the CF card

Displaying the operational status of the fans

Use the **display fan** command to display the operational status of the fans.

```
<Sysname> display fan
 Fan     1 State: Normal
```

Table 13 Output description

Field	Description
Fan 1	Number of the fan
State	The fan state: • Normal—The fan is operating properly. • Absent—The fan is not in position. • Fault—The fan fails.

Displaying the operational status of a power module

Use the **display power** command to display the operational status of a power module.

```
<Sysname> display power
 Power Information:
 Power 1 Status: Normal
```

Table 14 Output description

Field	Description
Power 1	Number of the power module
Status	The power module state: • Normal—The power module is operating properly. • Absent—The power module is not in position. • Fault—The power module fails.

Displaying the temperature information of the UTM device

Use the **display environment** command to display the temperature information of the UTM device.

```
<Sysname> display environment
 System Temperature information (degree centigrade):
-------------------------------------------------
 SlotNo    Temperature       Lower limit      Upper limit
 0          36                0                50
```

Field	Description
System Temperature information (degree centigrade)	System temperature (°C)

Field	Description
SlotNO	Number of the slot holding the interface module
Temperature	Current temperature
Lower limit	Lower threshold
Upper limit	Upper threshold

Displaying operational statistics of the UTM device

When you perform routine maintenance or the system fails, you may need to display the operational information of each functional module for locating failures. Generally, you need to run the **display** commands one by one. To collect more information one time, you can execute the **display diagnostic-information** command in any view to display or save the operational statistics of multiple functional modules of the UTM device. This command displays the output of the **display clock**, **display version**, **display device**, **display current-configuration** commands,and so on.

- Save the operational statistics of each functional module of the UTM device.

```
<Sysname> display diagnostic-information
Save or display diagnostic information (Y=save, N=display)? [Y/N]:y
Please input the file name(*.diag)[cfa0:/default.diag]:aa.diag
Diagnostic information is outputting to cfa0:/aa.diag.
Please wait...
Save succeeded.
```

Execute the **more aa.diag** command in user view, and then press the **Page Up** and **Page Down** keys to view the contents of the file **aa.diag**.

- Display the operational statistics of each functional module of the UTM device.

```
<Sysname> display diagnostic-information
Save or display diagnostic information (Y=save, N=display)? [Y/N]:n
================================================
  ==============display clock==============
================================================
08:54:16 UTC Fri 11/12/2010
================================================
  ==============display version==============
================================================
```

Omitted

Saving the running configuration of the UTM device

You can save the running configuration of the UTM device in one of the following modes:

- Fast saving: Executing the **save** command without the **safely** keyword. This mode saves the file more quickly but is likely to lose the existing configuration file if the device reboots or the power fails during the process. The fast saving mode is suitable for environments where the power supply is stable.
- Safe saving: Executing the **save** command with the **safely** keyword. The mode saves the file more slowly but can retain the configuration file in the device even if the device reboots or the power fails

during the process. The safe saving mode is preferred in environments where a stable power supply is unavailable or remote maintenance is involved.

Follow these steps to save the current configuration of the UTM device:

To do…	Use the command…	Remarks
Save the current configuration to the specified file, but the configuration file will not be set as the file for the next startup	**save** *file-url*	Use either command Available in any view
Save the current configuration to the root directory of the storage medium and specify the file as the startup configuration file that will be used at the next system startup	**save** [**safely**]	

NOTE:

- The configuration file must be with extension **.cfg**.
- During the execution of the **save** command, the startup configuration file to be used at the next system startup may be lost if the device reboots or the power supply fails. In this case, the device will boot with the factory defaults, and after the device reboots, you need to re-specify a startup configuration file for the next system startup.

Rebooting the UTM device

To reboot a UTM device, use one of the following methods:

- Use the **reboot** command to reboot a UTM device.
- Enable the scheduled reboot function at the CLI. You can set a time at which the UTM device can automatically reboot, or set a delay so that the UTM device can automatically reboot within the delay.
- Power on the UTM device after powering it off, which is also called hard reboot or cold start. Powering off a running UTM device causes data loss and hardware damages, and therefore is not recommended.

Perform the following operation to reboot the UTM device immediately:

To do…	Use the command…	Remarks
Reboot the UTM device immediately	**reboot**	Required Available in user view

Perform the following operation to enable the scheduled reboot function:

To do…	Use the command…	Remarks
Enable the scheduled reboot function and specify a specific reboot time and date	**schedule reboot at** *hh:mm* [*date*]	Use either command The scheduled reboot function is disabled by default. Available in user view
Enable the scheduled reboot function and specify a reboot waiting time	**schedule reboot delay** { *hh:mm* | *mm* }	

CAUTION:

- If the main host software file is not specified, do not use the **reboot** command to reboot the UTM device. In this case, you should specify the main host software file first, and then reboot the UTM device.
- The precision of the rebooting timer is 1 minute. One minute before the rebooting time, the device prompts “REBOOT IN ONE MINUTE” and reboots in one minute.
- If you are performing file operations when the device is to be rebooted, the system does not execute the **reboot** command for security.

Replacement procedures

This chapter includes these sections:

- Safety recommendations
- Replacing an interface module
- Replacing a CF card
- Replacing a transceiver module

Safety recommendations

1. Always wear an ESD-preventive wrist strap or ESD-preventive gloves when maintaining the UTM device hardware.
2. When operating a pluggable module, such as a CF card or interface module, note the following guidelines:

- Ensure good alignment with the slot to avoid damage to the module during installation or removal.
- Before removing a module, make sure that the captive screws are completely loosened. Otherwise, the panel of the module may be deformed.
- Avoid touching any components on the PCB of a module when observing or moving the module.
- Put a removed module on an antistatic workbench with the PCB side up or place it in an antistatic bag.

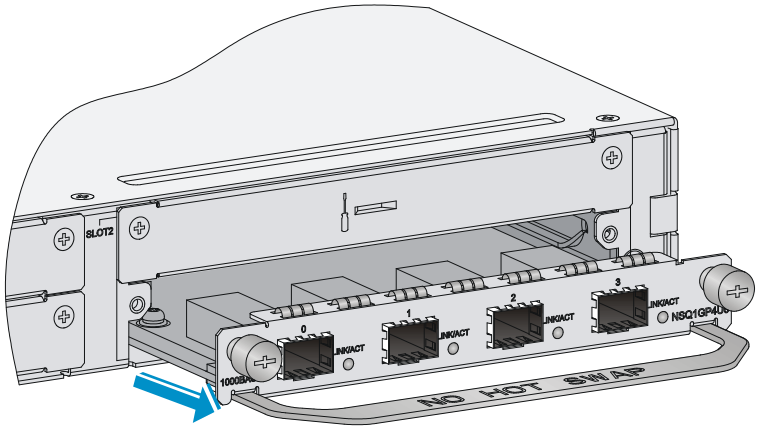
Replacing an interface module

The replacement procedures of 2GE, NSQ1GT2UA0, and NSQ1GP4U0 interface modules are the same. This section takes an NSQ1GP4U0 interafce module for example. Follow these steps to replace an interface module:

Step1 Use a screwdriver to loosen the captive screws of the interface module to be removed.

Step2 Holding the interface module handle, slowly pull the interface module out of the slot along the guide rails.

Figure 31 Remove an interface module



Step3 If you do not install a new interface module in the slot, install the filler panel. To install an interface module, see the chapter "Installing the UTM device."

Replacing a CF card

CAUTION:

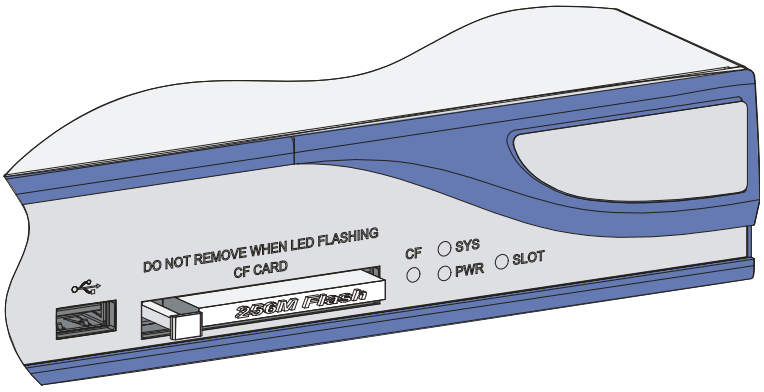
- To avoid hardware damage, do not remove the CF card when the UTM device is booting or the CF card LED is blinking.
- To protect the CF card, place it into an antistatic bag.

Follow these steps to replace a CF card:

Step1 Make sure that the CF card LED is not blinking.

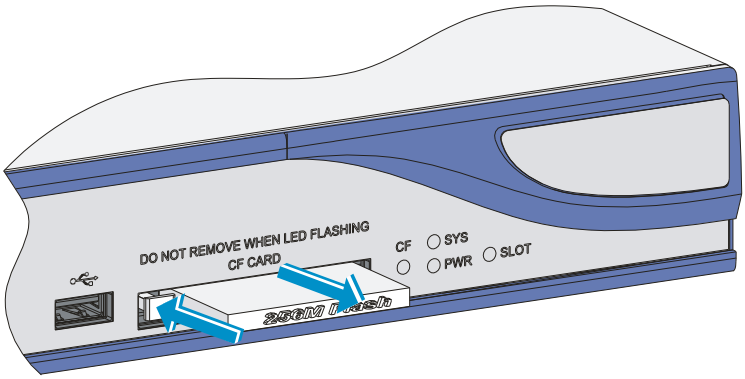
Step2 Press the CF card eject button so that the eject button projects from the panel.

Figure 32 Press the eject button



Step3 Press the eject button again to eject the CF card part way out of the slot, and then pull the CF card out of the slot.

Figure 33 Press the eject button to eject the CF card



Step4 Install a new CF card. For more information, see the chapter "Installing the UTM device."

Replacing a transceiver module

NOTE:

When replacing a transceiver module, make sure that the two transceiver modules connected by the same optical fiber have the same wavelength.

⚠ WARNING!

- Do not stare into the optical fibers.
- When removing a transceiver module, do not touch the golden finger of the transceiver module.

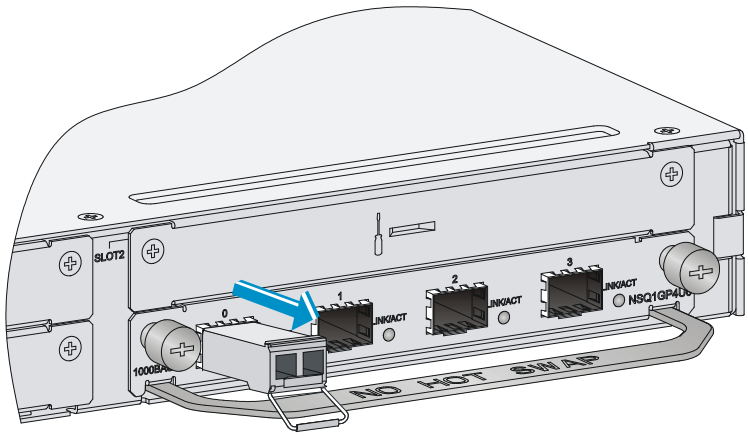
Follow these steps to replace a transceiver module:

Step1 Remove the optical fibers from the transceiver module.

Step2 Pivot the clasp downward to the horizontal position.

Step3 As shown in Figure 34, holding the handle of the transceiver module, gently pull the transceiver module out.

Figure 34 Remove a transceiver module



Step4 Insert the dust cap to the removed transceiver module, and put the module into its original shipping materials.

Step5 Install a new transceiver module. For more information, see the chapter "Installing the UTM device."

Troubleshooting

This chapter includes these sections:

- Power supply system failure
- Fan failure
- Configuration terminal problems
- Password loss
- Cooling system failure
- Interface module failure

NOTE:

- The barcode stuck on the UTM device chassis contains production and servicing information. Before you return a faulty UTM device for serving, provide the barcode information of the UTM device to your local sales agent.
- Keep the tamper-proof seal on a mounting screw on the chassis cover intact, and if you want to open the chassis, contact the local agent of HP for permission. Otherwise, HP shall not be liable for any consequence caused thereby.

Power supply system failure

The UTM device cannot be powered on. The power LED on the front panel is off.

Follow these steps to troubleshoot the power supply system:

Step1 Turn off the power switch.

Step2 Check whether the power cord is properly, firmly connected.

Step3 Check whether the power cord is damaged.

If the cause cannot be located in the steps above and the problem persists, contact your local sales agent.

Fan failure

After the UTM device is booted, the following information appears:

```
%Jun 22 16:11:37:485 2010 HP DEV/4/FAN FAILED:
 Fan 1 failed.
```

If such information appears, you need to open the chassis to check the fan. Contact your local sales agent.

Configuration terminal problems

If the configuration environment setup is correct, the configuration terminal displays boot information when the UTM device is powered on. If the setup is incorrect, the configuration terminal displays nothing or garbled text.

No terminal display

If the configuration terminal displays nothing when the UTM device is powered on, check the following items:

- The power supply system works properly.
- The console cable is properly connected.

If no problem is found, the following reasons may apply:

- The console cable is connected to an incorrect serial interface (the serial interface in use is not the one set on the terminal).
- The properties of the terminal are incorrect. You must configure the configuration terminal as follows: set **Bits per second** to **9600**, **Data bits** to **8**, **Parity** to **None**, **Stop bits** to **1**, **Flow control** to **None**, and **Terminal Emulation** to **VT100**.
- The console cable is not in good condition.

Garbled terminal display

If terminal display is garbled, check that the **Data bits** field is set to 8 for the configuration terminal.

Password loss

User password loss

If you lose your password, you cannot enter the system. In this case, you can boot the system by ignoring the system configuration. Follow these steps to solve the user password loss:

Step1 Enter the BootWare main menu, and select **6** to boot the system by ignoring the system configuration.

The system prompts the following:

```
Flag Set Success.
```

The output indicates that the setting succeeded.

Step2 When the BootWare main menu appears again, select **0** to reboot the system.

```
System is starting...
Booting Normal Extend BootWare.
```

Step3 Set a new password in system view after the system reboots.

```
<Sysname> system-view
[Sysname] user-interface console 0
[Sysname-ui-console0] authentication-mode password
[Sysname-ui-console0] set authentication password simple 123456
```

The output shows that the console port uses password authentication, and the password is set to 123456 and stored in plain text.

When you set the password by using the **set authentication password** { **cipher** | **simple** } *password* command, follow these guidelines.

- If the **cipher** keyword is specified, the password is stored in cipher text. You cannot view the password by using the **display current-configuration** command.
- If the **simple** keyword is specified, the password is stored in plain text. You can use the **display current-configuration** command to view the password in the current configuration.

NOTE:

After the UTM device reboots, the system runs with the initial default configuration, but the previous configuration file is still stored in the storage medium. To restore the previous configuration, use the **display saved-configuration** command to display the configuration, and then copy and execute the configuration.

Step4 Save the new password.

```
[Sysname] save
```

NOTE:

- To save the new password, execute the **save** command after modifying the user password.
- HP recommends saving the modification as the default configuration file.

Super password loss

You can clear the super password by selecting **8** on the BootWare main menu.

```
========================<EXTEND-BOOTWARE MENU>=========================
|<1> Boot System                                                      |
|<2> Enter Serial SubMenu                                             |
|<3> Enter Ethernet SubMenu                                           |
|<4> File Control                                                     |
|<5> Modify BootWare Password                                         |
|<6> Skip Current System Configuration                                |
|<7> BootWare Operation Menu                                          |
|<8> Clear Super Password                                             |
|<9> Storage Device Operation                                         |
|<0> Reboot                                                           |
==========================================================================
Enter your choice(0-9):8
```

The following output indicates that you have successfully cleared the super password.

```
Clear Application Password Success!
```

NOTE:

- Select option **8**, quit the menu, reboot the UTM device, and then you can enter system view directly.
- This setting (password clearing) is valid only for the first reboot of the UTM device. The super password will be restored after a second reboot.

Cooling system failure

When the temperature inside the UTM device exceeds 45°C (113°F), the cooling system may have failed.

Follow these steps to troubleshoot the cooling system:

Step1 Check whether the fans are running properly.

Step2 Check whether the working environment of the UTM device is well ventilated.

Step3 If the temperature inside the UTM device exceeds 60°C (140°F), the following information appears on the configuration terminal:

```
%Jun 28 10:27:27:653 2010 HP DRVMSG/3/Temp2High: Temperature Point 0/0 Too High.

#Jun 28 10:27:28:432 2010 HP DEV/1/BOARD TEMPERATURE UPPER:
 Trap 1.3.6.1.4.1.2011.2.23.1.12.1.16:frameIndex is 0, slotIndex 0.0

%Jun 28 10:27:28:433 2010 HP DEV/4/BOARD TEMP TOOHIGH:
 Board temperature is too high on Chassis 0 Slot 0, type is RPU.
```

Step4 Use the **display environment** command to check whether the temperature in the UTM device keeps rising. If the temperature inside the UTM device exceeds 90°C (194°F), power off the UTM device immediately and contact your local sales agent.

Interface module failure

After an interface module is installed and the UTM device is powered on, the LEDs on the interface module panel indicate abnormal operation.

Follow these steps to solve this problem:

Step1 Check whether the interface module cable is correctly selected.

Step2 Check whether the interface module cable is correctly connected.

Step3 Use the **display interface** command to check whether the interface has been correctly configured and is working properly.

Appendix A Technical specifications

Dimensions and weight

Table 15 Dimensions and weight

Item	Specification
Dimensions (H × W × D), excluding feet and mounting brackets	A-U200-A: 44.2 × 442 × 400 mm (1.74 × 17.40 × 15.75 in.) A-U200-S: 43.6 × 300 × 260 mm (1.72 × 11.81 × 10.24 in.)
Weight (fully configured)	A-U200-A: 5.9 kg (13.01 lb) A-U200-S: 2.22 kg (4.89 lb)

Storages

Table 16 Storages

Item	Specification
Flash	32 MB
Memory type and capacity	A-U200-A: DDR2 SDRAM, 1GB (default) A-U200-S: DDR2 SDRAM, 512 MB (default)
Compact flash (CF) card	256 MB by default for the built-in CF card; 256 MB, 512 MB, or 1 GB for an optional external CF card
USB interface	Host mode, reserved without software support

Power consumption range

Table 17 Power consumption range of the entire system

Item	Specification
Power consumption range	A-U200-A: 30 W to 46 W A-U200-S: 20 W to 27 W

Power consumption range

Table 18 Power consumption range of the entire system

Item	Specification
Rated voltage range	100 VAC to 240 VAC; 50 Hz or 60 Hz

Item	Specification
Maximum input current	A-U200-A: 1.6A A-U200-S: 1.5A
Maximum power	A-U200-A: 100W A-U200-S: 54W

Fixed Ethernet ports specifications

Table 19 Fixed Ethernet ports specifications

Item	Specifications	
Quantity	A-U200-A: 6 (GE0 through GE5) A-U200-S: 5 (GE0 through GE4)	
Connector type	RJ-45	
Interface type	Autosensing (Ethernet does not support MDI/MDIX autosensing when working in the forced mode)	
Frame format	Ethernet_II Ethernet_SNAP	
Rate and negotiation mode	10 Mbps (autosensing)	Half-/full-duplex auto-negotiation
	100 Mbps (autosensing)	Half-/full-duplex auto-negotiation
	1000 Mbps (autosensing)	Full-duplex auto-negotiation

NOTE:

The media dependent interface (MDI) standard is typically used for the Ethernet interfaces of network adaptors. The media dependent interface crossover (MDI-X) standard is typically used on hubs or LAN switches.

Console port

Table 20 Technical specifications for the console port

Item	Specification
Connector	RJ-45
Compliant standard	RS-232
Baud rate	9600 bps to 115200 bps 9600 bps (default)
Transmission distance	≤15 m (49.21 ft)
Services	• Provides connection to an ASCII terminal • Provides connection to the serial port of a local PC to run the terminal emulation program • Command line interface (CLI)

Appendix B LEDs

LEDs

Figure 35 A-U200-A LEDs

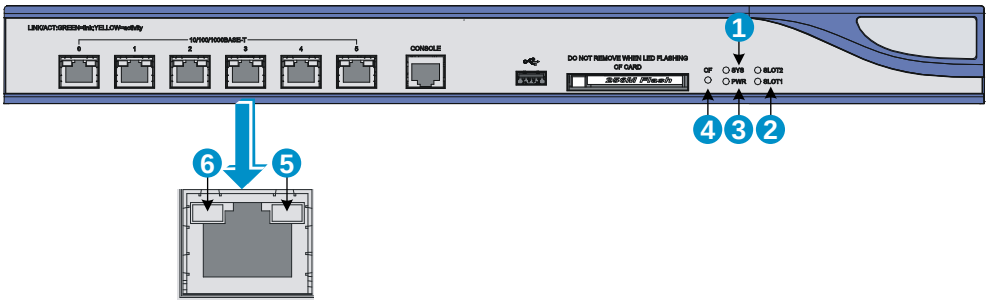


Figure 36 A-U200-S LEDs

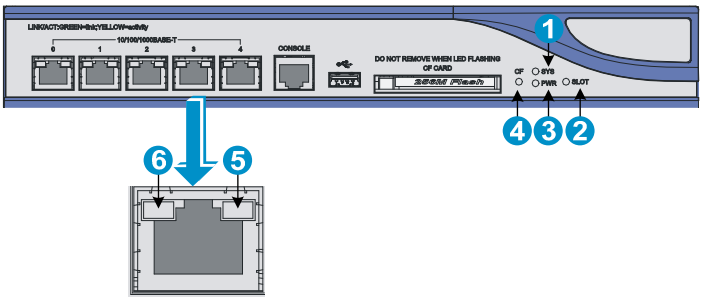


Table 21 Description of A-U200-A/A-U200-S LEDs

LED	Status	Meaning
1 SYS (green)	Off	The system is powered off or faulty.
	Slow blinking (at 1 Hz)	The UTM device is operating normally as configured.
	Fast blinking (at 8 Hz)	Software is being loaded or the system is not working.
2 SLOT (green)	Off	No interface module is in the slot or the interface module is faulty.
	On	An interface module is in the slot and operating normally.
3 PWR (green)	Off	The power module is not working or faulty.
	On	The power module is supplying power normally.
4 CF (green)	Off	No CF card is in position or the CF card cannot be identified.
	On	A CF card is in position and has passed the test. It can be removed in this state.
	Blinking	The system is accessing the CF card. Do not unplug the card in this state.

LED	Status	Meaning
❺ LINK (green)	Off	No link is present.
	On	A link is present.
❻ ACT (yellow)	Off	No data is being received or transmitted.
	Blinking	Data is being received or transmitted.

Appendix C Interface modules

NOTE:

- The UTM device does not support hot-swapping of interface modules.
- The A-U200-A supports NSQ1GT2UA0 and NSQ1GP4U0 interface modules, and the A-U200-S supports 2GE interface module.

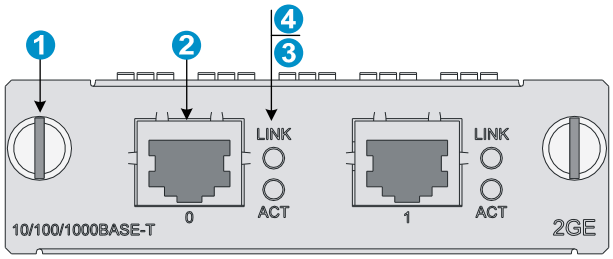
2GE interface module

Introduction

The 2GE interface module provides two RJ-45 copper ports.

Front view

Figure 37 2GE interface module front view



(1) Captive screw	(2) GE interface
(3) ACT LED of GE interface	(4) Link LED of GE interface

LEDs

Table 22 Description of the LEDs on the front panel of the 2GE interface module

LED	Status	Description
LINK(green)	Off	No link is present.
	On	A link is present.
ACT(yellow)	Off	No data is being transmitted or received.
	Blinking	Data is being transmitted or received.

Interface specifications

Table 23 Interface specifications of the 2GE interface module

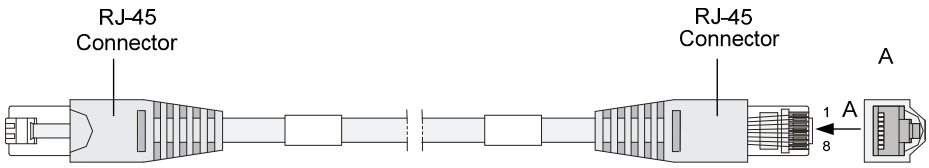
Item	Description
Connector type	RJ-45
Number of interfaces	2

Item	Description	
Interface standards	802.3, 802.3u, 802.3ab	
Interface type	Autosensing When working in the forced mode, Ethernet does not support MDI/MDIX autosensing.	
Frame formats	Ethernet_II Ethernet_SNAP	
Maximum transmission distance	100 m (328.08 ft.) over category-5 twisted pairs	
Rate and negotiation mode	10 Mbps (autosensing)	Half-/full-duplex auto-negotiation
	100 Mbps (autosensing)	Half-/full-duplex auto-negotiation
	1000 Mbps (autosensing)	Full-duplex auto-negotiation

Interface cable

The 2GE module uses a straight-through or crossover Ethernet cable for connection. For how to connect a twisted pair, see the chapter "Installing the UTM device."

Figure 38 Ethernet cable



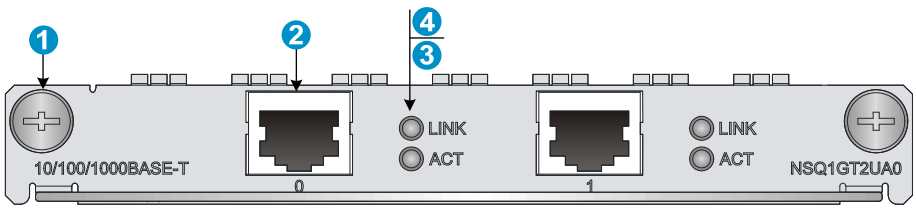
NSQ1GT2UA0 interface module

Introduction

The NSQ1GT2UA0 interface module provides two RJ-45 copper ports.

Front view

Figure 39 NSQ1GT2UA0 interface module front view



(1) Captive screw	(2) GE interface
(3) ACT LED of GE interface	(4) Link LED of GE interface

LEDs

See Table 22.

Interface specifications

See Table 23.

Interface cable

The NSQ1GT2UA0 interface module can use either standard network cables or crossover cables. For how to connect an Ethernet twisted pair, see the chapter "Installing the UTM device."

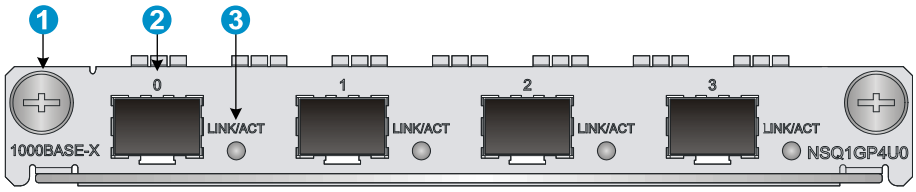
NSQ1GP4U0 interface module

Introduction

The NSQ1GP4U0 interface module provides four SFP fiber ports.

Front view

Figure 40 NSQ1GP4U0 interface module front view



(1) Captive screw	(2) SFP port
(3) SFP port LED (LINK/ACT)	

LEDs

Table 24 Description of LEDs on the front panel of the NSQ1GP4U0 interface module

LED	Status	Meaning
LINK/ACT (green)	Off	No link is present on the interface.
	On	A 1000 Mbps link is present on the SFP port.
	Blinking	The SFP port is transmitting or receiving data at 1000 Mbps.

Interface specifications

Table 25 Interface specifications of the NSQ1GP4U0 interface module

Item		Specification				
Connector type		SFP/LC				
Number of interfaces		4				
Interface standards		802.3, 802.3u, and 802.3ab Ethernet_II Ethernet_SNAP				
Interface speed		1000 Mbps				
Optical transmit power	Type	Multi-mode short haul	Single-mode medium haul	Long haul (1310 nm)	Long haul (1550 nm)	Ultra-long haul
	Min.	–9.5 dBm	–9 dBm	–2 dBm	–4 dBm	–4 dBm
	Max.	0 dBm	–3 dBm	5 dBm	1 dBm	2 dBm
Receiving sensitivity		–17 dBm	–20 dBm	–23 dBm	–21 dBm	–22 dBm

Item	Specification				
Central wavelength	850 nm	1310 nm	1310 nm	1550 nm	1550 nm
Max. transmission distance	0.55 km (0.34 miles)	10 km (6.21 miles)	40 km (24.86 miles)	40 km (24.86 miles)	70 km (43.50 miles)
Fiber type	62.5/125 μm multi-mode	9/125 μm single-mode	9/125 μm single-mode	9/125 μm single-mode	9/125 μm single-mode

Interface cable

The NSQ1GP4U0 interface module can work with SFP optical transceivers using optical fibers with LC-type connectors.

Figure 41 and Figure 42 show an SFP optical transceiver and an optical fiber with LC-type connectors respectively. For how to connect an optical fiber, see the chapter "Installing the UTM device."

Figure 41 SFP optical transceiver

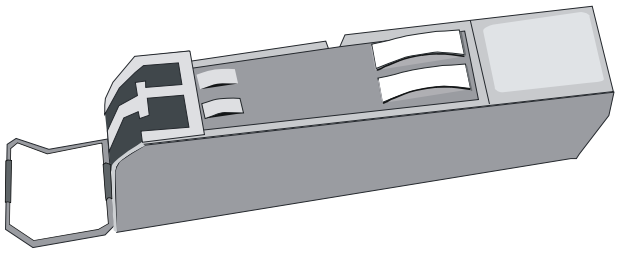
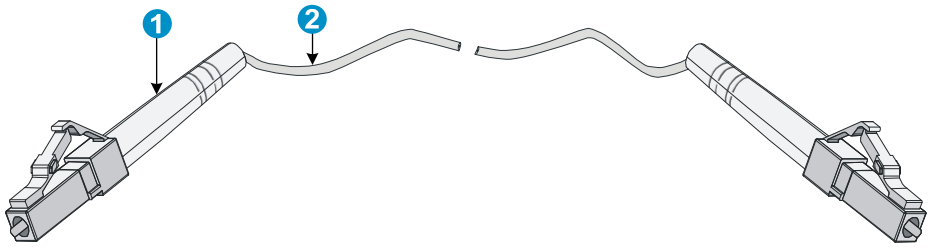


Figure 42 Optical fiber with LC connectors

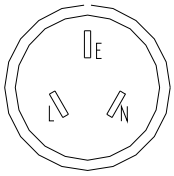
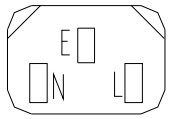
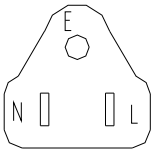
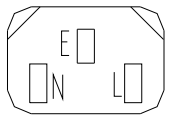


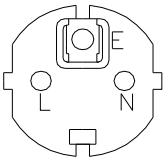
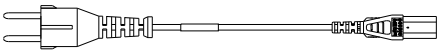
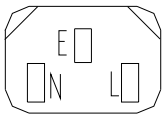
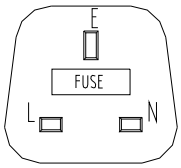
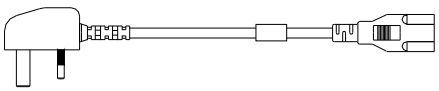
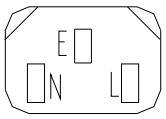
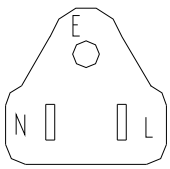
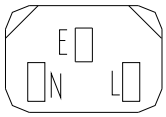
(1) LC-type connector (2) Optical fiber

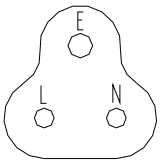
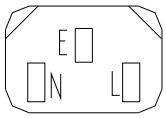
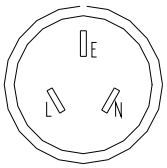
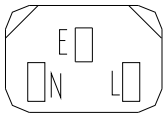
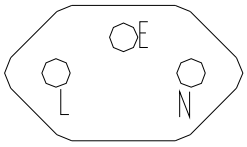
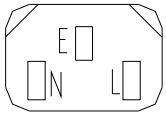
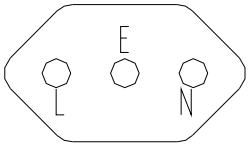
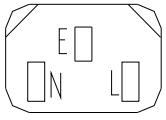
Appendix D AC power cables used in different countries or regions

10A AC power cables used in different countries or regions

Table 26 10A AC power cables used in different countries or regions

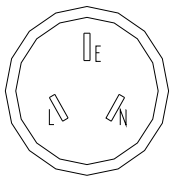
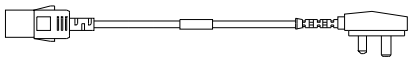
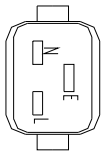
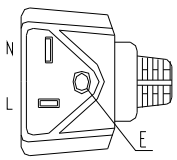
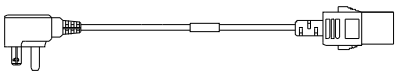
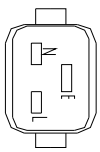
1	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	I type	04041104 (3 m, i.e., 9.8 ft)	Mainland China		
	Connector outline		Power cable outline		Connector outline
					
2	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	B type	04020728 (3 m, i.e., 9.8 ft)	Canada and U.S.A	Mexico, Argentina, Brazil, Columbia, Venezuela, Thailand, Peru, Philippine, and A6 countries or regions	
	Connector outline		Power cable outline		Connector outline
					
3	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables

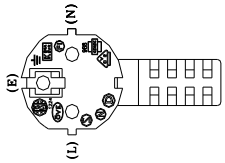
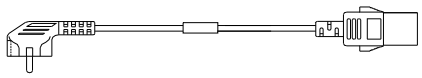
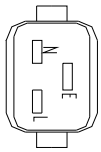
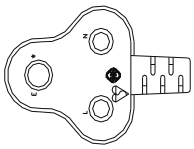
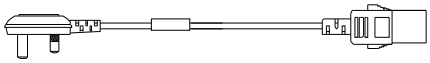
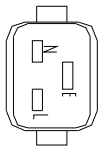
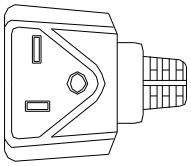
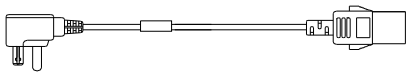
	F type	04041056 (3 m, i.e., 9.8 ft)	Holland, Denmark, Sweden, Finland, Norway, Germany, France, Austria, Belgium, and Italy	Indonesia, Turkey, Russia, and CIS	India
	Connector outline		Power cable outline		Connector outline
					
4	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	G type	04040890 (3 m, i.e., 9.8 ft)	U.K.	Malaysia, Singapore, Hong Kong, and Egypt	
	Connector outline		Power cable outline		Connector outline
					
5	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	B type	04040887 (3 m, i.e., 9.8 ft)	Japan		
	Connector outline		Power cable outline		Connector outline
					
6	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	D type	04040889 (3 m, i.e., 9.8 ft)	Hong Kong	South Africa	

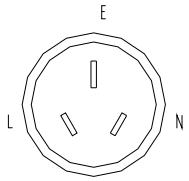
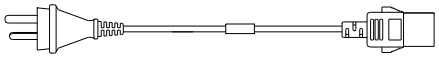
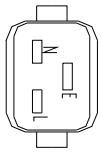
	Connector outline		Power cable outline		Connector outline
					
7	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	I type	04040888 (3 m, i.e., 9.8 ft)	Australia		
	Connector outline		Power cable outline		Connector outline
					
8	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	J type	04041119 (3 m, i.e., 9.8 ft)	Switzerland		
	Connector outline		Power cable outline		Connector outline
					
9	Connect or type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	L type	04041120 (3 m, i.e., 9.8 ft)	Italy		
	Connector outline		Power cable outline		Connector outline
					

16A AC power cables used in different countries or regions

Table 27 16A AC power cables used in different countries or regions

	Connector type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
1	**I** type	04043396 (3 m, i.e., 9.8 ft)	Mainland China		
	Connector outline		Power cable outline		Connector outline
					
	Connector type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
2	**B** type	0404A063 (3 m, i.e., 9.8 ft)	Canada and U.S.A	Mexico, Argentina, Brazil, Columbia, Venezuela, Thailand, Peru, Philippine, and A6 countries or regions	
	Connector outline		Power cable outline		Connector outline
					
3	Connector type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables

	F type	0404A061 (3 m, i.e., 9.8 ft)	Holland, Denmark, Sweden, Finland, Norway, Germany, France, Austria, Belgium, and Italy	Indonesia, Turkey, Russia, and CIS	
	Connector outline		Power cable outline		Connector outline
					
4	Connector type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	G type	0404A060 (3 m, i.e., 9.8 ft)	U.K.	Malaysia, Singapore, Hong Kong, and Egypt	
	Connector outline		Power cable outline		Connector outline
					
5	Connector type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables
	B type	0404A062 (3 m, i.e., 9.8 ft)	Japan		
	Connector outline		Power cable outline		Connector outline
					
6	Connector type	Code (Length)	Countries or regions where the type of power cables conforms to local safety regulations and can be used legally	Other countries or regions using this type of power cables	Countries or regions seldom using this type of power cables

I type	0404A01A (3 m, i.e., 9.8 ft)	Australia	
Connector outline		Power cable outline	Connector outline
			

Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

http://www.hp.com/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

http://www.hp.com/go/wwalerts

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Related information

Documents

To find related documents, browse to the Manuals page of the HP Business Support Center website:

http://www.hp.com/support/manuals

- For related documentation, navigate to the Networking section, and select a networking category.
- For a complete list of acronyms and their definitions, see *HP A-Series Acronyms*.

Websites

- HP.com http://www.hp.com
- HP Networking http://www.hp.com/go/networking
- HP manuals http://www.hp.com/support/manuals
- HP download drivers and software http://www.hp.com/support/downloads
- HP software depot http://www.software.hp.com

Conventions

This section describes the conventions used in this documentation set.

Command conventions

Convention	Description
Boldface	**Bold** text represents commands and keywords that you enter literally as shown.
Italic	*Italic* text represents arguments that you replace with actual values.
[ ]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x | y | ... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x | y | ...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x | y | ... } *	Asterisk-marked braces enclose a set of required syntax choices separated by vertical bars, from which you select at least one.
[x | y | ...] *	Asterisk-marked square brackets enclose optional syntax choices separated by vertical bars, from which you select one choice, multiple choices, or none.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.

GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in bold text. For example, the **New User** window appears; click **OK**.
>	Multi-level menus are separated by angle brackets. For example, **File** > **Create** > **Folder**.

Symbols

Convention	Description
WARNING	An alert that calls attention to important information that if not understood or followed can result in personal injury.
CAUTION	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
IMPORTANT	An alert that calls attention to essential information.
NOTE	An alert that contains additional or supplementary information.
TIP	An alert that provides helpful information.

Network topology icons

	Represents a generic network device, such as a router, switch, or firewall.
	Represents a routing-capable device, such as a router or Layer 3 switch.
	Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.

Port numbering in examples

The port numbers in this document are for illustration only and might be unavailable on your device.

Index

A C D E F G I L N P R S

A

Accessories supplied by the UTM device, 8
A-U200-A architecture description, 1
A-U200-S architecture description, 2

C

Checklist before installation, 9
Configuration terminal problems, 45
Connecting a power cord, 17
Connecting Ethernet cables, 15
Contacting HP, 62
Conventions, 63
Cooling system failure, 47

D

Dimensions and weight, 48
Displaying detailed information about the UTM device, 33
Displaying operational statistics of the UTM device, 37
Displaying software and hardware version information of the UTM device, 34
Displaying the CF card information, 35
Displaying the CPU usage of the UTM device, 35
Displaying the electrical label information of the UTM device, 34
Displaying the memory usage of the UTM device, 35
Displaying the operational status of a power module, 36
Displaying the operational status of the fans, 36
Displaying the temperature information of the UTM device, 36

E

Examining the installation site, 4

F

Fan failure, 44
Fixed Ethernet ports specifications, 49

G

Grounding the UTM device, 13

I

Installation flow, 11
Installation tools, 8
Installing a CF card, 15
Installing interface modules, 13
Installing the UTM device in a 19-inch rack, 11
Interface module failure, 47

L

LEDs, 50
Logging in to the UTM device through a web browser, 24
Logging in to the UTM device through Telnet, 24
Logging in to the UTM device through the console port, 19

N

NSQ1GP4U0 interface module, 54
NSQ1GT2UA0 interface module, 53

P

Password loss, 45
Performing basic settings for the UTM device, 25
Power consumption range, 48
Power consumption range, 48
Power supply system failure, 44
Powering on the UTM device, 23

R

Rebooting the UTM device, 38
Related information, 62
Replacing a CF card, 41
Replacing a transceiver module, 42
Replacing an interface module, 40

S

Safety recommendations, 40
Safety recommendations, 3
Saving the running configuration of the UTM device, 37
Storages, 48